# Fischer-Clifford Matrices and Character Tables of Inertia Groups of Maximal Subgroups of Finite Simple Groups of Extension Type


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# Abstract

The aim of this dissertation is to calculate character tables of group extensions. There are several well–developed methods for calculating the character tables of group extensions. In this dissertation we study the method developed by Bernd Fischer, the so–called Fischer–Clifford matrices method, which derives its fundamentals from the Clifford theory. We consider only extensions $G$ of the normal subgroup $K$ by the subgroup $Q$ with the property that every irreducible character of $K$ can be extended to an irreducible character of its inertia group in $G$, if $K$ is abelian. This is indeed the case if $G$ is a split extension, by a well known theorem of Mackey.

A brief outline of the classical theory of characters pertinent to this study, is followed by a discussion on the calculation of the conjugacy classes of extension groups by the method of coset analysis. The Clifford theory which provide the basis for the theory of Fischer-Clifford matrices is discussed in detail. Some of the properties of these Fischer-Clifford matrices which make their calculation much easier, are also given.

As mentioned earlier we restrict ourselves to split extension groups $G$ in which $K$ is always elementary abelian. In this thesis we are concerned with the construction of the character tables of certain groups which are associated with $\overline{F}i_{22}$ and $Sp_8(2)$. Both of these groups have a maximal subgroup of the form $2^7 : Sp_6(2)$ but they are not isomorphic to each other. In particular we are interested in the inertia groups of these maximal subgroups, which are split extensions. We use the technique of the

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Fischer-Clifford matrices to construct the character tables of these inertia groups. These inertia groups of $2^7 : Sp_6(2)$, the maximal subgroup of $\overline{F}i_{22}$, are $2^7 : S_8$, $2^7 : O_6^-(2)$ and $2^7 : (2^5 : S_6)$. The inertia group of $2^7 : Sp_6(2)$, the affine subgroup of $Sp_8(2)$, is $2^7 : (2^5 : S_6)$ which is not isomorphic to the group with the same form which was mentioned earlier.

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# Declaration

I declare that *Fischer-Clifford matrices and character tables of inertia groups of maximal subgroups of finite simple groups of extension type* is my own work, that it has not been submitted before for any degree or assessment to any other university, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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# Notation and conventions

Throughout the thesis all groups will be assumed to be finite, unless otherwise stated. We will use the notation and terminology from the ATLAS [11] and [24].

| | |
|---|---|
| $\mathbb{N}$ | natural numbers |
| $\mathbb{Z}$ | integers |
| $\mathbb{Q}$ | rational numbers |
| $\mathbb{R}$ | real numbers |
| $\mathbb{C}$ | complex numbers |
| $G, K, Q, H$ | groups |
| $1_G$ | the identity element of $G$. |
| $F$ | a field |
| $F^*$ | $F - 0$ |
| $K \leq G$ | $K$ is a subgroup of $G$ |
| $K \trianglelefteq G$ | $K$ is a normal subgroup of $G$ |
| $K \cong G$ | $K$ is isomorphic to $G$ |
| $< x, y >$ | the subgroup generated by $x$ and $y$ |
| $K \cdot Q$ | an extension of $K$ by $Q$ |
| $K : Q$ | a split extension of $K$ by $Q$ |
| $o(g)$ | order of $g \in G$ |
| $[g]$ | a conjugacy class of $G$ with representative $g$ |
| $N_G(H)$ | the normalizer of the subgroup $H$ in $G$ |
| $Hg$ | the right coset of $H$ in $G$ |
| $X, Y, \Omega$ | sets |

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| | |
|---|---|
| $\|\Omega\|$ | the cardinality of the set $\Omega$ |
| $G_\theta$ | stabilizer of $\theta$ in $G$ |
| $I_G(\theta)$ | inertia group of $\theta$ in $G$ |
| $k^g$ | conjugation of $k$ by $g$ |
| $k_1 \sim k_2$ | $k_1$ is conjugate to $k_2$ |
| $\psi \downarrow H$ | the restriction of the character $\psi$ of $G$ to the subgroup $H$ |
| $\phi^G$ | the induction of the character $\phi$ of subgroup $H$ to $G$ |
| $C_G(g)$ | centralizer of $g$ in $G$ |
| $Irr(G)$ | set of irreducible characters of $G$ |
| $I_G$ | the identity character of $G$ |
| $\chi(G/H)$ | the permutation character of $G$ on $H$ |
| $dim(V)$ | the dimension of a vector space $V$ |
| $S_n$ | the symmetric group on $n$ symbols |
| $GF(q)$ | the Galois field of $q$ elements |
| $V(n,q)$ | a vector space of dimension $n$ over $GF(q)$ |
| $Sp(2n,q)$ | symplectic group of dimension $2n$ over $GF(q)$ |
| $O_6^-(2)$ | the full orthogonal group of dimension 6 over $GF(2)$, $\|O_6^-(2)\| = 2^7 \times 3^5 \times 5^2 \times 7$ |

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# Chapter 1

# Introduction

Since the classification of all finite simple groups, more recent work in group theory has involved methods of calculating character tables of finite groups. Classification of finite simple groups states that, each finite simple group is isomorphic to exactly one of the following

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- A cyclic group of prime order,
- An Alternating group $A_n$ of degree at least 5,
- A group of Lie type,
- One of twenty–six sporadic simple groups.

More recent work in group theory involves the calculation of character tables of the maximal subgroups of the sporadic simple groups. The character tables of all the maximal subgroups are not yet known. Many of these maximal subgroups are extensions of elementary abelian groups, so methods have been developed for the calculation of character table of extensions of elementary abelian groups. A knowledge of the character tables of a group provides considerable information about the group, and hence it is of importance in the physical sciences as well as in pure mathematics. Bernd Fischer developed a powerful and interesting technique for calculating the character tables of group extensions although there exist techniques

such as the Schreier-Sims algorithm, Todd-Coxeter coset enumeration method, the Burnside-Dixon algorithm, etc, to construct character tables of finite groups. This technique, known as the technique of the Fischer–Clifford matrices, derives its fundamentals from the Clifford theory. If $G = K.Q$ is an appropiate extension of $K$ by $Q$, the method involves the construction of a nonsingular matrix for each conjugacy class of $G/K$. In this thesis , we apply the Fischer-Clifford theory only to split extensions. This technique has also been discussed and used by many other researchers, but applied only to split extensions or to the case when every irreducible character of $K$ can be extended to an irreducible character of its inertia group in $G$.

However the same method can not be used to construct character tables of certain non-split group extensions. For example, it can not be applied to the non-split extensions of the forms $3^7 \cdot O_7(3)$ and $3^7 \cdot (O_7(3) : 2)$ which are maximal subgroups of Fischer's largest sporadic simple group $Fi'_{24}$ and its automorphism group $Fi_{24}$, respectively. In an attempt to generalize these methods to such type of non-split group extensions, Ali[1] considered the projective representations and characters and showed how the technique of Fischer-Clifford matrices can be applied to any such type of non-split extension. However in order to apply this technique, the projective characters of the inertia factors must be known and these can be difficult to determine for some groups. Ali [1] successfully applied the technique of Fischer-Clifford matrices and determined the Fischer-Clifford matrices and hence the character table of the non-split extensions $3^7 \cdot O_7(3)$ and $3^7 \cdot (O_7(3) : 2)$.

In Chapter 2, we present some results on group characters which are used in the later chapters. We mostly concentrate on those results which are applied in Chapters 4 and 5 to describe the Fischer-Cifford matrix methods. We start by discussing the general theory of representations and characters, and go on to discuss the restricted, induced and permutation characters, which will be used in the later chapters for constructing the character tables of the groups that are studied in this thesis. The characters being studied are ordinary complex characters.

In Chapter 3 we give some preliminary results on group extensions that will be needed in subsequent chapters. In Section 3.1 we define group extensions and then we describe the method of *coset analysis* to compute the conjugacy classes of group extensions, where we first restrict ourselves to split extensions of abelian groups (Section 3.2) and then the case where the extension is not necessarily split (Section 3.3). In the remainder of Section 3.3 we prove and discuss techniques that are useful in the determination of the orders of the elements of $G = K : Q$. The technique of coset analysis was developed and first used by Moori in [31], [32] and has since been widely used for computing the conjucacy classes of group extensions.

Chapter 4 is devoted to the study of Clifford theory for ordinary representations of a group $G$ and its related results which will be required to describe the Fischer-Clifford matrices. In Section 4.1 we study the relationship between characters of a group $G$ and its normal subgroup $K$. We present various sufficient conditions for the extendibility of an irreducible character $\theta$ of $K$ to its inertia group $H$ in $G$.

In Chapter 5 we describe the theory of the Fischer-Clifford matrices. If $G = K.Q$ is an appropiate extension of $K$ by $Q$, the method involves the construction of a Fischer matrix for each conjugacy class of $G/K \cong Q$. Then by using these matrices together with the fusion maps and character tables of some subgroups of $Q$ which are inertia factors of the inertia groups in $G$, we are able to construct the complete character table of $G$. Section 5.1 gives definitions and preliminaries, Section 5.2 deals with the properties of the Fischer-Clifford matrices, in particular we study a special case of Fischer-Clifford matrices of an extension $G = K \cdot Q$ with the property that every irreducible character of $K$ can be extended to an irreducible character of its inertia group in $G$. In the last part of Section 5.2 we discuss additional properties of the Fisher-Clifford matrix $M(g)$ for a split extension $G = K : Q$, where K is an elementary abelian 2-group.

Classical linear groups are divided into three main categories, namely the symplectic, orthogonal and unitary groups. In Chapter 6, we shall concentrate on symplectic groups. We give a brief overview of the general theory of symplectic groups

and their affine subgroups. Two groups which are of special interest in this dissertation are split extensions of elementary abelian 2-groups by the symplectic group $Sp_6(2)$ and are maximal subgroups of the symplectic group $Sp_8(2)$ and $\bar{F}i_{22}$, the full automorphism group of the smallest Fischer simple group $Fi_{22}$, respectively. These groups have the form $2^7 : Sp_6(2)$ but are not isomorphic to each other. In particular we study the inertia groups of these groups.

The subgroups of the symplectic groups which fix a non-zero vector of the underlying symplectic space are called *affine subgroups*. Ali [1] constructed the character table of the group $A(4) \cong 2^7 : Sp_6(2)$, the affine subgroup of $Sp_8(2)$ of index 255, by means of its Fischer-Clifford matrices. In Chapter 7 we shall study the inertia groups of $A(4)$, which are also split extensions of elementary abelian 2-groups. In this chapter, the conjugacy and the Fischer-Clifford matrices of the various inertia groups will be computed. We shall use the technique of the Fischer-Clifford matrices to construct the character tables of these inertia groups. We shall use the properties of the Fischer-Clifford matrices and additional information which are discussed in Chapter 5 (Section 5.2), to construct their entries. Most of the Fischer-Clifford matrices have a lot of candidates satisfying the properties discussed in Section 5.2 and therefore we used the additional information and methods in the elimination process. The complete fusion of each of these inertia groups into $2^7 : Sp_6(2)$ will be fully determined.

Moori and Mpono [34] studied the group $2^7 : Sp_6(2)$ which is a maximal subgroup of $\bar{F}i_{22}$ of index 694980 and hence constructed its character table by using the technique of Fischer-Clifford matrices. In Chapter 8 we shall study the inertia group $2^7 : (2^5 : S_6)$ of $2^7 : Sp_6(2)$. Note that this group has the same form as one of the inertia groups of $A(4)$ discussed in Chapter 7 but are not isomorphic to each other. We determine its Fischer-Clifford matrices and hence construct its character table. The fusion map of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ will be fully determined.

All the computations were carried out with the aid of of MAGMA [7], GAP Version 4.3 [41] running on a desktop computer. For notation on the conjugacy

classes of elements and permutation characters, we follow the notation in the ATLAS [11] and the ATLAS of Brauer Characters [24]. All our groups and sets are finite unless otherwise specified. Programmes A and B that have been used to compute the conjucacy classes of the various inertia groups and the orders of the elements of their conjugacy classes will be given in the Appendix A. The consistency and accuracy of the character tables have been tested by using Programme C in GAP [41] and is given in Appendix B.

# Chapter 2

# Group Characters

Two ways of approaching representation and character theory are through the use of modules on the one hand ( for instance, the approach used by James and Liebeck [23]), and through the classical approach used by Feit[14] for example, on the other hand. Our discussion is along the classical approach and for this purpose we follow the lecture notes of Moori [33], the works of Mpono [35] and Whitley [42].

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In this chapter we give preliminary results on group characters that will be needed in later chapters to construct the character tables of the groups that are studied in this thesis. We start by presenting in section 2.1 the general theory on representations and characters of groups. In section 2.2 we discuss the role of normal subgroups in finding some characters of a group. In sections 2.3 to 2.5 restricted, induced and permutation characters are discussed to establish the relationship between characters of groups and the characters of their subgroups. For further reading on representations and characters, readers are referred to [3], [5], [8], [9], [10], [14], [21], [22], [23], [27], [30], [37] and many other relevant sources.

## 2.1 Representations and Characters

In this section we give some preliminary results on representations and characters of groups .

**Definition 2.1.1.** Let $G$ be a finite group and $F$ a field. A homomorphism $\rho : G \to GL_n(F)$ is called a representation of $G$ over $F$ or simply an $F$-representation. The general linear group, $GL_n(F)$, is the multiplicative group of all non-singular $n \times n$ matrices over $F$ for some integer $n$. The representation $\rho$ is said to have degree $n$.

Two $F$-representations $\rho_1$ and $\rho_2$ are said to be *equivalent* if there exists $P \in GL_n(F)$ such that $\rho_1(g)=P\rho_2(g)P^{-1}$ for all $g \in G$. An $F$-representation $\rho$ of $G$ is said to be *reducible* if it is equivalent to a representation $\alpha$ which is given by

$$\alpha(g) = \begin{pmatrix} \beta(g) & \gamma(g) \\ 0 & \delta(g) \end{pmatrix}$$

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for all $g \in G$, where $\beta, \gamma, \delta$ are $F$-representations of $G$. If $\rho$ is not reducible, then it is said to be *irreducible*. $\rho$ is defined to be fully reducible if it is equivalent to a representation $\alpha$ where

$$\alpha(g) = \begin{pmatrix} \beta(g) & 0 \\ 0 & \delta(g) \end{pmatrix}$$

for all $g \in G$. $\rho$ is completely reducible if it is equivalent to a representation $\alpha$ given by

$$\alpha(g) = \begin{pmatrix} \beta_1(g) & 0 & \cdots 0 \\ 0 & \beta_2(g) & \cdots 0 \\ \vdots & \ddots & \cdots 0 \\ 0 & 0 \cdots & \beta_r(g) \end{pmatrix}$$

for all $g \in G$ and where each $\beta_i$ is an irreducible $F$-representation of $G$. Then $\beta_1, \beta_2, .., \beta_r$ are called constituents of $\rho$.

**Theorem 2.1.2.** *(**Mashke's Theorem**) Let $G$ be a finite group. If $F$ is a field of characteristic zero, or whose characteristic does not divide the order of $G$, then every $F$-representation of $G$ is completely reducible.*

**Proof**:See[14,(1.1)].

**Theorem 2.1.3.** *(**Schur's Lemma**) Let $\rho_1$ and $\rho_2$ be two irreducible $F$-representations of a group $G$ over a field $F$. Suppose $P$ is a non-zero matrix over $F$ such that $\rho_1(g)P = P\rho_2(g)$ for all $g \in G$. Then $P$ is nonsingular and $\rho_1$ is equivalent to $\rho_2$.*

**Proof**:See[14,(1.2)]

**Corollary 2.1.4.** [32] *Let $F$ be an algebraically closed field, and $\rho$ an irreducible $F$-representation of a group $G$. Then the only matrices that commute with every matrix $\rho(g)$, $g \in G$ are the scalar matrices $aI_n$, where $a \in F$ and $I_n$ is the $n \times n$ identity matrix.*

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**Proof**: Let $P$ be an $n \times n$ matrix such that $P\rho(g) = \rho(g)P$ for all $g \in G$. Then for any $a \in F$ we have that

$$(aI_n - P).\rho(g) = \rho(g).(aI_n - P), \text{ for all } g \in G. \quad (1)$$

Let $m(x) = det(xI_n - P)$ be the characteristic polynomial of $P$. Since $m(x)$ is a polynomial over $F$ and $F$ is algebraically closed, then there exists $a_1 \in F$ such that $m(a_1) = 0_F$. Hence $det(a_1I_n - P) = 0_F$ and thus $a_1I_n - P$ is singular. Then from relation (1) and Schur's Lemma, we obtain that $a_1I_n - P = 0$ and thus $a_1I_n = P$. □

**Definition 2.1.5.** The function $\chi_\rho : G \to F$ defined by $\chi_\rho(g) = trace(\rho(g))$ is called the $F - character$ of $G$ afforded by the $F - representation$ $\rho$. The degree of $\chi_\rho$ is the degree of $\rho$. The *trivial character* is the character $1_G$ defined by $1_G(g) = 1_F$ for every $g \in G$. An *irreducible character* is a character afforded by an irreducible representation.

**Lemma 2.1.6.** [42] *The following properties hold for a group $G$:*

1. *A character of $G$ is constant on the conjugacy classes of $G$.*

2. *Equivalent representations afford the same character.*

3. *$\chi(1)$ is the degree for any character $\chi$.*

4. *The sum of any two characters of $G$ is again a character of $G$.*

**Proof**: Parts 1 and 2 follow from the fact that for matrices $A$ and $P$,
$trace(P^{-1}AP) = trace(A)$.

3. Let $\chi$ have degree $n$. Then $\chi(1) = trace(I_n) = n$.

4. Let $\chi_{\rho_1}$ and $\chi_{\rho_2}$ be characters of $G$, afforded by the representations $\rho_1$ and $\rho_2$, respectively. Define the function $\psi$ on $G$ by $\psi(g)=\begin{pmatrix} \rho_1(g) & 0 \\ 0 & \rho_2(g) \end{pmatrix}$. Then $\psi$ is a representation of $G$ with $\chi_\psi = \chi_{\rho_1} + \chi_{\rho_2}$. □

**Definition 2.1.7.** Let $G$ be a group, $F$ a field and $\phi : G \to F$ be a function which is *constant* on conjugacy classes. Then $\phi$ is called a *class function* of $G$.

From the above definition, we observe that every character is a class function. We shall use the notation $Irr(G)$ to denote the set of all irreducible characters of the group $G$.

From now on, we will consider representations and characters of a finite group $G$ over the complex field $\mathbb{C}$.

If $\phi$ is any class function on $G$, then $\phi$ can be uniquely expressed in the form $\phi = \sum_{i=1}^{r} a_i\chi_i$ where $a_i \in \mathbb{C}$ and $Irr(G) = \{\chi_1, ..., \chi_r\}$. Moreover $\phi$ is a character if and only if all $a_i \in \mathbb{N} \cup 0$.(See[19,(2.8)]).

**Theorem 2.1.8.** *The following properties hold:*

1. *Two representations of $G$ have the same character if and only if they are equivalent.*

2. *The number of irreducible characters of $G$ is equal to the number of conjugacy classes of $G$.*

*3. Any character can be written as a sum of irreducible characters.*

**Proof**:

1. See [14, (2.6)]
2. See [14, (2.16)]
3. This follows from Mashke's Theorem. □

**Lemma 2.1.9.** *Let $\chi$ be a character of $G$ afforded by a representation $\rho$ of degree $n$. Then*

1. *for $g \in G$, $\rho(g)$ is similar to a diagonal matrix $diag(\epsilon_1, ..., \epsilon_n)$ where each $\epsilon_i$ is a complex root of unity.*
2. *$\chi(g) = \epsilon_1 + ... + \epsilon_n$ and $\chi(g^{-1}) = \overline{\chi(g)}$, where $\overline{\chi(g)}$ denotes the complex conjugate of $\chi(g)$.*

**Proof** See[20, (2.15)]. □

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$Irr(G)$ are presented in a table, called the *character table* of $G$. In this character table of $G$, the rows correspond to the irreducible characters of $G$ and the columns to the conjugacy classes of $G$. The entry $a_{ij}$ in this table is the value of the $i$-th irreducible character on an element of the $j$-th conjugacy class. This character table of $G$ satisfies certain orthogonality relations, which are given in the next few theorems following the definition.

**Definition 2.1.10.** Let $\chi_1$ and $\chi_2$ be two characters of a group $G$. Then the *inner product* of $\chi_1$ and $\chi_2$ is defined by

$$< \chi_1, \chi_2 >= \frac{1}{|G|} \sum_{g \in G} \chi_1(g)\overline{\chi_2(g)}.$$

**Theorem 2.1.11.** *(**Generalized Orthogonality Relation**) Let $G$ be a group and*

*$Irr(G)$= $\{\chi_1, \chi_2, ..., \chi_r\}$. Then the following holds for every $h \in G$.*

$$\frac{1}{|G|}\sum_{g\in G}\chi_i(gh)\chi_j(g^{-1}) = \delta_{ij}\frac{\chi_i(h)}{\chi_i(1_G)}.$$

**Proof**: See Theorem 2.13 of [20]. □

**Theorem 2.1.12.** [20] *(**First Orthogonality Relation**) Let $G$ be a group and $Irr(G)$= $\{\chi_1, \chi_2, ..., \chi_r\}$. Then*

$$\frac{1}{|G|}\sum_{g\in G}\chi_i(g)\overline{\chi_j(g)} = \delta_{ij} =< \chi_i, \chi_j > .$$

**Proof**: Let $h = 1_G$ in the generalized orthogonality relation to obtain the desired result. □

**Theorem 2.1.13.** ([20] , [35]) *(**Second Orthogonality Relation**) Let $G$ be a group and $Irr(G)$= $\{\chi_1, \chi_2, ..., \chi_r\}$ and $\{g_1, g_2, ..., g_r\}$ be a set of representatives of the conjugacy classes of elements of $G$. Then*

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$$\sum_{\chi\in Irr(G)}\chi(g_i)\overline{\chi(g_j)} = \delta_{ij}|C_G(g_i)|.$$

**Proof** Let $X$ be the charactertable of $G$. Then viewed as a matrix, $X$ is an $r \times r$ matrix whose $(i, j)$-th entry is given by $\chi_i(g_j)$. Let $C_i$ be the conjugacy class which contains $g_i$ and $D$ be the diagonal matrix with entries $\delta_{ij}|C_i|$. Then by the first orthogonality relation, we obtain that

$$|G|\delta_{ij} = \sum_{g\in G}\chi(g_i)\overline{\chi(g_j)} = \sum_{t=1}^{r}|C_t|\chi_i(g_t)\overline{\chi_j(g_t)}.$$

Then we obtain a system of $r^2$ equations which can be written as a single matrix equation as follows

$$|G|I = XD\overline{X}^T,$$

where $I$ is the identity matrix and $\bar{X}^T$ is the transpose of $\bar{X}$. Since $X$ is a nonsingular matrix, then we obtain that

$$|G|I = D\overline{X}^T X.$$

Rewriting the above matrix system as a system of equations yields

$$|G|\delta_{ij} = \sum_{t=1}^{r} |C_i|\overline{\chi_t(g_i)}\chi_t(g_j).$$

Hence we obtain that

$$\sum_{\chi \in Irr(G)} \chi(g_i)\overline{\chi(g_j)} = |C_G(g_i)|\delta_{ij}. \quad \square$$

**Theorem 2.1.14.** [42] *Let $Irr(G) = \{\chi_1, \chi_2, ..., \chi_r\}$ and $\chi$ be any character of $G$. Then*

1. *$\chi$ can be expressed uniquely as $\chi = \sum_{i=1}^{r} a_i\chi_i$ where $a_i \in \mathbb{N} \cup \{0\}$.*
2. *If $\chi = \sum_{i=1}^{r} a_i\chi_i$ then $\langle \chi, \chi \rangle = \sum_{i=1}^{r} a_i^2$ .*
3. *$\chi$ is irreducible if and only if $\langle \chi, \chi \rangle = 1$ .*

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**Proof**:

1. By Theorem 2.1.8(3), $\chi = \sum_{i=1}^{r} a_i\chi_i$ for $a_i \in \mathbb{N} \cup \{0\}$. For each $i$, $\langle \chi, \chi_i \rangle = \langle \sum_{i=1}^{r} a_i\chi_i, \chi \rangle = a_i \langle \chi_i, \chi_i \rangle = a_i$ by the First Orthogonality Relation, so the $a_i$ are unique.
2. Follows from First Orthogonality Relation.
3. Follows from parts 1 and 2 .

**Definition 2.1.15.** Let $G$ be a group, $\chi$ be a character of $G$ and $Irr(G) = \{\chi_1, \chi_2, ..., \chi_r\}$ such that $\chi = \sum_{i=1}^{r} a_i\chi_i$, where $a_i \in \mathbb{N} \cup \{0\}$. Then those $\chi_i$ with

$a_i \in \mathbb{N}$ are called the *irreducible constituents* of $\chi$. We also say that $\chi$ contains $a_i$ *copies* of the *irreducible character* $\chi_i$. In general, if $\phi$ is a character of $G$ such that $\chi - \phi$ is a character or is zero, then $\phi$ is a constituent of $\chi$.

## 2.2 Normal Subgroups

**Lemma 2.2.1.** [42]*Let $\chi$ be a character of a group $G$ afforded by a representation $\rho$. Then $g \in ker(\rho)$ if and only if $\chi(g) = \chi(1)$.*

**Proof**: Let $n = \chi(1)$, so $n$ is the degree of $\rho$. If $g \in ker(\rho)$ then $\rho(g) = I_n = \rho(1)$, where $I_n$ is the $n \times n$ identity matrix, so $\chi(g) = n = \chi(1)$. Conversely, assume $\chi(g) = \chi(1) = n$. By Lemma 2.1.9, $\chi(g) = \epsilon_1 + ... + \epsilon_n$ where each $\epsilon_i$ is a complex root of unity. Therefore, $\epsilon_1 + \epsilon_2 + ... + \epsilon_n = n$. But $|\epsilon_i| = 1$ for each $i$, so we must have $\epsilon_i = 1$ for each $i$. Hence $\rho(g)$ is similar to $\text{diag}(\epsilon_1, \epsilon_2, ..., \epsilon_n) = I_n$, so $g \in ker(\rho)$. □

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**Definition 2.2.2.** Let $\chi$ be a character of a group $G$. We define

$$ker(\chi) = \{g \in G : \chi(g) \ = \chi(1)\}.$$

From Lemma 2.2.1, it follows that $ker(\chi) = ker(\rho)$ and hence $ker(\chi)$ is a normal subgroup of $G$. If $Irr(G) = \{\chi_1, \chi_2, ..., \chi_r\}$, then every normal subgroup is the intersection of some of the $ker(\chi_i)$.

**Theorem 2.2.3.** *Let $N$ be a normal subgroup of a group $G$. Then*

1. *If $\chi$ is a character of $G$ and $N \subseteq ker(\chi)$, then $\chi$ is constant on the cosets of $N$ in $G$ and the function $\hat{\chi}$ defined on $G/N$ by $\hat{\chi}(Ng) = \chi(g)$ is a character of $G/N$.*

2. *If $\hat{\chi}$ is a character of $G/N$, then the function $\chi$ defined by $\chi(g) = \hat{\chi}(Ng)$ is a character of $G$ and the $\chi$ has the same degree as $\hat{\chi}$.*

*3. In both of the statements above , $\chi \in Irr(G)$ if and only if $\hat{\chi} \in Irr(G/N)$.*

**Proof**: See Theorem 2.2.2 of [42]

If $N$ is a normal subgroup of $G$ and $\rho$ is a representation of $G$ such that $N \subseteq ker(\rho)$, then there exists a unique representation $\hat{\rho}$ of $G/N$ defined by $\hat{\rho}(Ng) = \rho(g)$. Thus knowing $\rho$, we can obtain $\hat{\rho}$ and vice versa. We also obtain that $\rho$ is irreducible if and only if $\hat{\rho}$ is irreducible. Hence $\rho$ and $\hat{\rho}$ can be identified. If $\rho$ affords a character $\chi$ of $G$, then $\hat{\rho}$ affords a character $\hat{\chi}$ of $G/N$ and hence $\chi$ and $\hat{\chi}$ can be identified. Under this identification, we obtain that

$$Irr(G/N) = \{\chi \in Irr(G) | N \subseteq ker(\chi)\}.$$

Therefore the irreducible characters of $G/N$ are precisely those irreducible characters of $G$ which contain $N$ in their kernels.

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**Definition 2.2.4.** Let $N$ be a normal subgroup of $G$ and let $\hat{\chi}$ be a character of $G/N$, then the character $\chi$ which is defined by

$$\chi(g) = \hat{\chi}(Ng) for g \in G$$

is called the *lift* of $\hat{\chi}$ to $G$.

The process of obtaining characters of a group from the characters of any of its quotient groups using theorem 2.2.3 is called the *lifting process*.

## 2.3 Restriction of Characters

**Definition 2.3.1.** Let $G$ be a group and $H$ be a subgroup of $G$. If $\rho : G \longrightarrow GL_n(\mathbb{C})$ is a representation of $G$, then $\rho \downarrow H : H \longrightarrow GL_n(\mathbb{C})$ given by

$$\rho \downarrow H(h) = \rho(h), \quad \forall\ h \in H,$$

is a representation of $H$. We say that $\rho \downarrow H$ is the restriction of $\rho$ to $H$. If $\chi$ is a character of $G$ afforded by $\rho$, then we say $\chi \downarrow H$ is the restriction of $\chi$ to $H$ and is a character of $H$. $\chi \downarrow H$ is a character of $H$ afforded by the representation $\rho \downarrow H$ such that

$$\chi \downarrow H = \sum_{\psi \in Irr(H)} \delta_\psi \psi, \ \ where\ \ \delta_\psi \in \mathbb{N} \cup \{0\}.$$

The characters $\chi \downarrow H$ and $\chi$ take on the same values on the elements of $H$. If $\chi \downarrow H$ is irreducible, then $\chi$ is irreducible in $G$ but the converse is not true in general. Karpilovsky in [26] proves a theorem (Theorem 23.1.4) due to Gallagher(1966) that if $H \leq G$, $\chi \in Irr(G)$ such that $\chi(g) \neq 0$ for each $g \in G \setminus H$, then $\chi \downarrow H$ is irreducible and for any $g \in G \setminus H$, $\chi(g)$ is a root of unity. We also observe that (see [23]) every irreducible character of $H$ is a constituent of some irreducible character of $G$ restricted to $H$.

**Theorem 2.3.2.** [23] *Let $G$ be a group, $H \leq G$, $\chi \in Irr(G)$ and $Irr(H) = \{\psi_1, \psi_2, ..., \psi_r\}$. Then*

$$\chi \downarrow H = \sum_{i=1}^{r} \delta_i \psi_i,$$

*where $\delta_i \in \mathbb{N} \cup \{0\}$ satisfy the following inequality*

$$\sum_{i=1}^{r} \delta_i^2 \leq [G : H] \qquad (**)$$

*Moreover, we have equality in* $(**)$ *if and only if* $\chi(g) = 0$*, for all* $g \in (G \setminus H)$*.*

**Proof:** We obtain that

$$\begin{aligned} \sum_{i=1}^{r} \delta_i^2 &= \frac{1}{|H|} \sum_{h \in H} \chi(h).\overline{\chi(h)} \quad \textit{so that} \\ |H| \sum_{i=1}^{r} \delta_i^2 &= \sum_{h \in H} \chi(h).\overline{\chi(h)} \qquad (***) \end{aligned}$$

Since $\chi$ is irreducible, then we have that

$$\begin{aligned} 1 = \langle \chi, \chi \rangle_G &= \frac{1}{|G|} \sum_{g \in G} \chi(g).\overline{\chi(g)} \\ &= \frac{1}{|G|} \sum_{g \in H} \chi(g).\overline{\chi(g)} + \frac{1}{|G|} \sum_{g \in (G \setminus H)} \chi(g).\overline{\chi(g)} \\ &= \frac{|H|}{|G|} \sum_{i=1}^{r} \delta_i^2 + \frac{1}{|G|} \sum_{g \in (G \setminus H)} \chi(g).\overline{\chi(g)} \quad \textit{by} \qquad (***) \\ &= \frac{|H|}{|G|} \sum_{i=1}^{r} \delta_i^2 + \frac{1}{|G|} \sum_{g \in (G \setminus H)} |\chi(g)|^2 \end{aligned}$$

and therefore

$$\frac{|H|}{|G|} \sum_{i=1}^{r} \delta_i^2 = 1 - \frac{1}{|G|} \sum_{g \in (G \setminus H)} |\chi(g)|^2 \leq 1$$

Hence

$$\sum_{i=1}^{r} \delta_i^2 \leq \frac{|G|}{|H|} = [G : H]$$

Equality in $(**)$ will be obtained if

$$\begin{aligned} \frac{1}{|G|}\sum_{g\in(G\setminus H)}|\chi(g)|^2 &= 0 \\ \text{if and only if } |\chi(g)|^2 &= 0 \quad \forall\, g\in(G\setminus H) \\ \text{if and only if } \chi(g) &= 0 \quad \forall\, g\in(G\setminus H) \end{aligned}$$

Thus the equality in $(**)$ holds. $\square$

**Theorem 2.3.3.** *Let $G$ be a group, $H$ be a normal subgroup of $G$ and $\chi \in Irr(G)$. Then all the constituents of $\chi \downarrow H$ have the same degree.*

**Proof**: See Proposition 20.7 of [23]. $\square$

We have seen how the irreducible characters of $G$ can be used to find characters of a subgroup $H$ and can now look at a technique of finding the characters of $G$ from the irreducible characters of any subgroup$H$.

## 2.4 Induced Characters

**Definition 2.4.1.** Let $H$ be a subgroup of $G$. The right transversal, $\{x_1, x_2, ..., x_r\}$, of $H$ in $G$ is a set of representatives for the right cosets of $H$ in $G$.

Let $H$ be a subgroup of a group $G$ such that the set $\{x_1, x_2, ..., x_r\}$ is a transversal for $H$ in $G$. Let $\phi$ be a representation of $H$ of degree $n$. Then we define $\phi^*$ on $G$ as follows :

$$\phi^*(g) = \begin{pmatrix} \phi(x_1gx_1^{-1}) & \phi(x_1gx_2^{-1}) & ... & ... & ... & \phi(x_1gx_r^{-1}) \\ \phi(x_2gx_1^{-1}) & \phi(x_2gx_2^{-1}) & ... & ... & ... & \phi(x_2gx_r^{-1}) \\ ... & ... & ... & ... & ... & ... \\ ... & ... & ... & ... & ... & ... \\ \phi(x_ngx_1^{-1}) & \phi(x_ngx_2^{-1}) & ... & ... & ... & \phi(x_ngx_r^{-1}) \end{pmatrix}$$

where $\phi(x_i g x_j^{-1})$ are $n \times n$ submatrices of $\phi^*(g)$ satisfying the property that

$$\phi(x_i g x_j^{-1}) = 0_{n\times n} \ \forall x_i g x_j^{-1} \notin H$$

Then we can show $\phi^*(g)$ is a representation of $G$ of degree $nr$.

**Definition 2.4.2.** Let $G$, $H$, $\phi$ and $\phi^*$ be as above. then the representation $\phi^*$ is called the representation of $G$ induced from the representation $\phi$ of $H$ and we denoted it by $\phi^G$.

If $\psi$ is a representation of $H$ which is equivalent to $\phi$, then it can be shown that $\psi^G$ is equivalent to $\phi^G$. Thus the induction process preserves equivalence between representations.

**Definition 2.4.3.** Let $G$ be a group and $H \leq G$. Let $\chi$ be a class function of $H$. Then we define $\chi^G$ as follows:

$$\chi^G(g) = \frac{1}{|H|}\sum_{x\in G} \chi^o(xgx^{-1}),\ g \in G,$$

$$\text{where} \quad \chi^o(h) = \begin{cases} \chi(h) & \text{if } \ x \in H \\ 0 & \text{otherwise} \end{cases}$$

Then $\chi^G$ is a class function of $G$, called the induced class function of $G$ induced from $\chi$. Also we have that $deg(\chi^G) = [G : H]deg(\chi)$.

**Theorem 2.4.4.** [20] *(**Frobenius Reciprocity**) Let $H \leq G$, $\chi$ be a class function on $H$ and $\phi$ a class fuction on $G$. Then*

$$\langle\ \chi\ ,\ \phi \downarrow H\rangle_H = \langle\ \chi^G,\ \phi\rangle_G$$

**Proof:**

$$\begin{aligned}
\langle\, \chi^G,\ \phi\rangle_G &= \frac{1}{|G|}\sum_{g\in G}\chi^G(g).\overline{\phi(g)} \\
&= \frac{1}{|G|}\sum_{g\in G}\Big(\frac{1}{|H|}\sum_{x\in G}\chi^0(xgx^{-1})\Big).\overline{\phi(g)} \\
&= \frac{1}{|G|.|H|}\sum_{g\in G}\sum_{x\in G}\chi^0(xgx^{-1}).\overline{\phi(g)} \qquad (***)
\end{aligned}$$

Let $y = xgx^{-1}$. Then as g runs over $G$, $xgx^{-1}$ runs through $G$. Also since $\phi$ is a class function on $G, \phi(y) = \phi(xgx^{-1}) = \phi(g)$. Thus by $(***)$ we have

$$\begin{aligned}
\langle\, \chi^G,\ \phi\rangle_G &= \frac{1}{|G|.|H|}\sum_{y\in G}\sum_{x\in G}\chi^0(y).\overline{\phi(y)} \\
&= \frac{1}{|G|.|H|}\sum_{x\in G}\Big(\sum_{y\in G}\chi^0(y).\overline{\phi(y)}\Big) \\
&= \frac{1}{|G|.|H|}|G|\sum_{y\in G}\chi^0(y).\overline{\phi(y)} \\
&= \frac{1}{|H|}\sum_{y\in H}\chi(y).\overline{\phi(y)} \\
= \langle\, \chi, \phi\downarrow H\rangle_H \quad \square
\end{aligned}$$

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Let $H \leq G$ and $\phi$ be a representation of $H$ that affords a character $\chi$ of $H$. Then $\chi^G$ is a character of $G$ afforded by the induced representation $\phi^G$ of $G$. The character $\chi^G$ is called the *induced character* of $G$. The induction and restriction processes do not necessarily preserve irreducibility of characters.

**Theorem 2.4.5.** *Let $G$ be a group and $H \leq G$. Let $\chi$ be a character of $H$, $g \in G$ and $\{x_1, x_2, ..., x_m\}$ be a set of representatives of conjugacy classes of elements of $H$ which fuse into the conjugacy class $[g]$ in $G$. Then we have*

1. $\chi^G(g) = 0$ *if* $H \cap [g] = \emptyset$ .
2. $\chi^G(g) = |C_G(g)| \sum_{i=1}^{m} \frac{\chi(x_i)}{|C_H(x_i)|}$ *if* $H \cap [g] \neq \emptyset$ .

**Proof:** We obtain that

$$\chi^G(g) \;=\; \frac{1}{|H|}\sum_{x\in G}\chi^0(xgx^{-1}).$$

If $H \cap [g] \;=\; \emptyset$, then $xgx^{-1} \notin H$ and thus $\chi^0(xgx^{-1}) \;= 0 \quad \forall\; x \in G$ and hence $\chi^G(g) \;=\; 0$.

Now if $H \cap [g] \;\neq\; \emptyset$, then as $x$ runs over $G$, $xgx^{-1} = y$ covers $[g]$ exactly $|C_G(g)|$ times, thus we have

$$\begin{aligned}
\chi^G(g) \;&=\; \frac{1}{|H|} \;\times\; |C_G(g)| \sum_{y\in[g]} \chi^0(y) \\
&=\; \frac{1}{|H|} \;\times\; |C_G(g)| \sum_{y\in([g]\cap H)} \chi(y) \\
&=\; \frac{|C_G(g)|}{|H|} \times \sum_{i=1}^{m} [H : C_H(x_i)].\chi(x_i) \\
&=\; |C_G(g)| \sum_{i=1}^{m} \frac{\chi(x_i)}{|C_H(x_i)|}.
\end{aligned}$$

Hence the result. $\square$

**Theorem 2.4.6.** *Let $G$ be a group, $K$ and $H$ subgroups of $G$ such that $K \leq H \leq G$ and $\chi$ be a character of $K$. Then for all $g \in G$ we have*

1. $(\chi^H)^g = (\chi^g)^{g^{-1}Hg}$
2. $(\chi^g)^G = (\chi^G)$

**Proof**: See[26]

Readers are referred to [4], [6] [22]and [36] for further reading on induced characters.

## 2.5 Permutation Characters

Let $G$ be a finite group throughout.

**Definition 2.5.1.** $G$ acts on a finite set $\Omega$ if for each $g \in G$ and $\alpha \in \Omega$, there is an element $\alpha^g$ in $\Omega$ such that $\alpha^1 = \alpha$ and $(\alpha^g)^h = \alpha^{gh}$ for all $\alpha \in \Omega$ and $g, h \in G$.

**Proposition 2.5.2.** *$G$ acts on $\Omega \Leftrightarrow$ there is a homomorphism $\rho : G \to S_\Omega$, where $S_\Omega$ is the symmetric group on $\Omega$.*

**Proof:** Suppose $G$ acts on $\Omega$. Define a mapping
$\rho : G \to S_\Omega$ by $\rho(g) : \alpha \mapsto \alpha^g \quad \forall \alpha \in \Omega, g \in G$. If $\alpha, \beta \in \Omega$ then $(\alpha)\rho(g) = (\beta)\rho(g)$ implies that $\alpha^g = \beta^g$ and $\alpha = \alpha^1 = \alpha^{gg^{-1}} = (\alpha^g)^{g^{-1}} = (\beta^g)^{g^{-1}} = \beta^{gg^{-1}} = \beta^1 = \beta$.
Also if $\beta \in \Omega$ then $(\beta)^{g^{-1}} \in \Omega$ and $(\beta)^{g^{-1}}\rho(g) = (\beta^{g^{-1}})^g = \beta^{g^{-1}g} = \beta^1 = \beta$.
Therefore $\rho(g) \in S_\Omega$.
Furthermore,
$(\alpha)\rho(gh) = \alpha^{gh} = (\alpha^g)^h = (\alpha^g)\rho(h) = (\alpha\rho(g))\rho(h) = (\alpha)(\rho(g)\rho(h))$. This proves that $\forall \alpha \in \Omega : \rho(gh) = \rho(g)\rho(h)$; so $\rho$ is the required homomorphism from $G$ to $S_\Omega$.
Conversely, suppose $\rho : G \to S_\Omega$ is a homomorphism. Then $\rho(1) = 1_{S_\Omega}$ and $\rho(gh) = \rho(g)\rho(h)$; so

1. $(\alpha)\rho(1) = \alpha 1_{S_\Omega} = \alpha$ and
2. $(\alpha)\rho(gh) = (\alpha)(\rho(g)\rho(h)) = ((\alpha)\rho(g))\rho(h) \quad \forall \alpha \in \Omega$.

Define an action of $G$ on $\Omega$ by $\alpha^g = \alpha(\rho(g)) \quad \forall \alpha \in \Omega, g \in G$.
Then $\alpha = \alpha^1$ and $\alpha^{gh} = (\alpha^g)^h$ by (1) and (2). This shows that $G$ acts on $\Omega$. $\square$

If $G$ acts on $\Omega$ then this defines an equivalence relation on $\Omega$ as follows: If $\alpha, \beta \in \Omega$ then $\alpha \sim \beta \Leftrightarrow \exists\ g \in G$ such that $\alpha = \beta^g$. The relation $\sim$ on $\Omega$ is

(i) reflexive: For $\alpha = \alpha^1$ implies $\alpha \sim \alpha$

(ii) symmetric: If $\alpha \sim \beta$ then $\exists\ g \in G$ such that $\alpha = \beta^g$. Then $\beta = \beta^1 = \beta^{gg^{-1}} = (\beta^g)^{g^{-1}} = \alpha^{g^{-1}}$ so $\beta \sim \alpha$.

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(iii) transitive: If $\alpha \sim \beta$ and $\beta \sim \gamma$ then $\alpha = \beta^g$ and $\beta = \gamma^h$ for some $g, h \in G$. Therefore, $\alpha = (\gamma^h)^g = \gamma^{hg}$ hence $\alpha \sim \gamma$.

Denote by $[\alpha]$ the equivalence class containing $\alpha \in \Omega$. Then

$$\begin{aligned} [\alpha] &= \{\beta \in \Omega | \beta \sim \alpha\} \\ &= \{\beta \in \Omega | \beta = \alpha^g \text{ for some g} \in \text{G}\} \\ &= \{\alpha^g | g \in G\} \\ &= \alpha^G \end{aligned}$$

$\alpha^G$ is called the *orbit of* $G$ *on* $\Omega$ containing $\alpha$. The equivalence relation $\sim$ determines a partition of $\Omega$ by these equivalence classes, that is, $\Omega = \cup_{\alpha \in \Omega}[\alpha]$ and $[\alpha] \cap [\beta] = \emptyset$ if $\alpha \neq \beta$.

Let $G_\alpha = \{g \in G | \alpha^g = \alpha\}$. Then $G_\alpha \leq G$. Since $\alpha = \alpha^1$ we have $1 \in G_\alpha$. Also if $g, h \in G_\alpha$, then $\alpha^{gh} = (\alpha^g)^h = \alpha^h = \alpha$ and $\alpha = \alpha^1 = \alpha^{gg^{-1}} = (\alpha^g)^{g^{-1}} = \alpha^{g^{-1}}$, which shows that $gh \in G_\alpha, g^{-1} \in G_\alpha$.

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Hence, $G_\alpha$ is a subgroup of $G$, called the stabilizer of $\alpha$ in $G$. Let $T = \{G_\alpha g | g \in G\}$ be the set of right cosets of $G_\alpha$ in $G$. We show next that there is a one-to-one correspondance between $T$ and the orbit $\alpha^G$ of $G$ on $\Omega$ containing $\alpha$.

**Lemma 2.5.3.** $G_\alpha g = G_\alpha h \Leftrightarrow \alpha^g = \alpha^h$.

**Proof:**

$$\begin{aligned} G_\alpha g = G_\alpha h &\Leftrightarrow gh^{-1} \in G_\alpha \\ &\Leftrightarrow \alpha^{gh^{-1}} = \alpha \\ &\Leftrightarrow (\alpha^g)^{h^{-1}} = \alpha \\ &\Leftrightarrow \alpha^g = \alpha^h \quad \square \end{aligned}$$

Define a mapping $\Phi : T \to \alpha^G$ by $G_\alpha g \mapsto \alpha^g$. If $G_\alpha g = G_\alpha h$ then $\alpha^g = \alpha^h$ and so $\Phi(G_\alpha g) = \Phi(G_\alpha h)$, which shows that $\Phi$ is well-defined, by lemma 2.5.3. If

$G_\alpha g, G_\alpha h \in T$ with $\Phi(G_\alpha g) = \Phi(G_\alpha h)$ then $\alpha^g = \alpha^h$ and so $G_\alpha g = G_\alpha h$, by lemma 2.5.3. Hence $\Phi$ is injective.

If $x \in \alpha^G$ then $x = \alpha^h$ for some $h \in G$. So $\Phi(G_\alpha h) = \alpha^h = x$. This shows that $\Phi$ is also surjective. Thus $\Phi$ is the required one-to-one correspondence between $T$ and $\alpha^G$.

Therefore $|\alpha^G| = |T| = [G : G_\alpha] = \frac{|G|}{|G_\alpha|}$ or $|\alpha^G||G_\alpha| = |G|$.

**Corollary 2.5.4.** *The length of any orbit of $G$ on $\Omega$ divides the order of $G$.*

**Proof:** $|\alpha^G||G_\alpha| = |G|$ and therefore $|\alpha^G|$ divides $|G|$. $\square$

If $G$ acts on $\Omega$, this action defines a representation of $G$ as follows:

Let $\Omega = \{\alpha_1, \alpha_2, \cdots, \alpha_n\}$ and for each $g \in G$ define the $n \times n$ matrix $\pi_g$ by $\pi_g = (a_{ij})$ where

$$a_{ij} = \begin{cases} 1, & \text{if } \alpha_i^g = \alpha_j \\ 0, & \text{if otherwise} \end{cases}$$

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**Remark 2.5.5.** *$a_{ii} = 1$ if $\alpha_i^g = \alpha_i$ and so a point $\alpha_i \in \Omega$ is fixed by $g \Leftrightarrow$ the entry in the $(i, i)$ position on the main diagonal of the matrix $(a_{ij})$ is* 1.

Then $\pi : G \to \mathrm{GL(n, \mathbb{C})}$ defined by $\pi : g \mapsto \pi_g = (a_{ij})_{n \times n}$ is a representation of $G$.

For $g, h \in G$, let $\pi_g = (a_{ij})$ and $\pi_h = (b_{ij})$. Then $\pi_g \pi_h = (a_{ij})(b_{ij}) = (c_{ij})$

and so

$$\begin{aligned} c_{ij} = 1 &\Leftrightarrow a_{ik} b_{kj} = 1 \text{ for some } 1 \leq \mathrm{k} \leq \mathrm{n} \\ &\Leftrightarrow a_{ik} = 1 \text{ and } \mathrm{b_{kj}} = 1 \\ &\Leftrightarrow \alpha_i^g = \alpha_k \text{ and } \alpha_{\mathrm{k}}^{\mathrm{h}} = \alpha_{\mathrm{j}} \\ &\Leftrightarrow \alpha_i^{gh} = (\alpha_i^g)^h = \alpha_k^h = \alpha_j \end{aligned}$$

Hence $\pi_{gh} = (c_{ij}) = \pi_g \pi_h$ and so $\pi(gh) = \pi(g)\pi(h)$. Therefore $\pi(g) = \pi_g$ is a representation of $G$.

Denote by $\chi_\pi$ the character, called the *permutation character*, afforded by the representation $\pi : G \to \mathrm{GL(n, \mathbb{C})}$ then $\chi_\pi(g) = tr(\pi(g)) = tr(\pi_g) = |\{\alpha \in \Omega | \alpha^g = \alpha\}| =$

number of points of $\Omega$ fixed by $g$, by the above remark. Therefore, $\chi_\pi(1)$ = degree of the permutation character = $|\Omega|$.

**Definition 2.5.6.** The action of $G$ on $\Omega$ is said to be *transitive* if $G$ has only one orbit on $\Omega$ i.e. if $\alpha \in \Omega$ then $\Omega = \alpha^G$

**Example 2.5.7.** Let $H$ be a subgroup of $G$ ($H \leq G$). And let $\Omega = \{Ha | a \in G\}$= set of right cosets of $H$ in $G$. Define $(Ha)^g := Hag$. Then $(Ha)^1 = Ha.1 = Ha$ and $(Ha)^{gh} = Ha(gh) = H(ag) = (Hag)^h = ((Ha)^g)^h$
Therefore $(Ha)^g = Hag$ defines an action of $G$ on $\Omega$.
Since $(Ha)^G = \{(Ha)^g | g \in G\} = \{Hag | g \in G\} = \Omega$, it follows that the action of $G$ on $\Omega$ has only one orbit and so the action is transitive i.e. $G$ acts *transitively* on $\Omega$.

Let $\Omega = \{Ha_1, Ha_2, \cdots, Ha_r\}$ where $\{a_1, a_2, \cdots, a_r\}$ is a transversal for $H$ in $G$.
This action of $G$ on $\Omega$ gives rise to a permutation character $\chi_\pi$ of degree $|\Omega| = [G : H]$ = index of $H$ in $G$. In fact $\chi_\pi = (1_H)^G$ = trivial character $1_H$ of $H$ induced to $G$. $\chi_\pi(g)$ = number of points of $\Omega = \{Ha_1, Ha_2, \cdots, Ha_r\}$ fixed by $g$. Now $(Ha_i)^g = Ha_i \Leftrightarrow Ha_ig = Ha_i \Leftrightarrow a_iga_i^{-1} \in H$. In other words, $Ha_i$ is fixed by $g \Leftrightarrow a_iga_i^{-1} \in H$. Therefore

$$\chi_\pi(g) = \sum_{i=1}^{r} \Phi^0(a_iga_i^{-1}) \ ,$$

where

$$\Phi^0(y) = \begin{cases} 1, & \text{if } y \in H \\ 0, & \text{if } y \notin H, \end{cases}$$

Thus $\chi_\pi = (1_H)^G$
Conversely, if $G$ acts transitively on any set, then the associated permutation character is induced from the trivial character of some subgroup of $G$, according to the following theorem.

**Theorem 2.5.8.** *Let $G$ act transitively on $\Omega$. Let $\alpha \in \Omega$ and let $H = G_\alpha$. Then*

*$(1_H)^G$ is the permutation character of the action, where $1_H$ is the trivial character of $H$.*

**Proof:** $\Omega = \alpha^G$ since $G$ acts transitively on $\Omega$. There is a one-to-one correspondence between $\Omega$ and $T = \{G_\alpha g | g \in G\}$ given by $\alpha^g \mapsto G_\alpha g$ for $g \in G$.
Let $g \in G$. Then $(\alpha^k)^g = \alpha^k \Leftrightarrow \alpha^{kg} = \alpha^k \Leftrightarrow \alpha^{kgk^{-1}} = \alpha \Leftrightarrow kgk^{-1} \in G_\alpha = H \Leftrightarrow kg \in Hk \Leftrightarrow Hkg = Hk \Leftrightarrow (Hk)^g = Hk$, where $G$ acts on the right cosets of $H$ as in the example 2.5.7.
Therefore the permutation character of the action of $G$ on $\Omega$ is the same as the permutation character of the action of $G$ on the right cosets of $H$ in $G$, which is $(1_H)^G$. $\square$

**Corollary 2.5.9.** *If $G$ acts on $\Omega$ with permutation character $\chi$ and has $k$ orbits on $\Omega$, then $< \chi, 1_G >= k$.*

**Proof:** Write $\Omega = \bigcup_{i=1}^{k} \theta_i$, where $\theta_i$ are the orbits of $G$ on $\Omega$. Let $\chi_i$ be the permutation character of $G$ on $\theta_i$, so $\chi = \sum_{i=1}^{k} \chi_i$ (this is because $\chi_i(g)$ = number of points in $\theta_i$ fixed by $g$ and so $\chi(g) = \sum_{i=1}^{k} \chi_i(g)$ = number of points in $\Omega$ fixed by $g$).

For $\alpha_i \in \theta_i, \chi_i = (1_{G_{\alpha_i}})^G$, by theorem 2.5.8, so

$$\begin{aligned} < \chi_i, 1_G > &= < (1_{G_{\alpha_i}})^G, 1_G >_G \\ &= < 1_{G_{\alpha_i}}, 1_G \downarrow G_{\alpha_i} >_H, \text{ by Frobenius Reciprocity} \\ &= < 1_{G_{\alpha_i}}, 1_{G_{\alpha_i}} >= 1 \end{aligned}$$

Therefore,

$$\begin{aligned} < \chi, 1_G > &= < \sum_{i=1}^{k} \chi_i, 1_G > \\ &= \sum_{i=1}^{k} < \chi_i, 1_G > \; = \; k \quad \square \end{aligned}$$

Every subgroup of $G$ gives rise to a permutation character, as shown by the previous results.

Conversely, we can show the existence of a subgroup $H$ if we can identify the character $(1_H)^G$. Because this character is a transitive permutation character, it must satisfy certain necessary conditions. We give these conditions in theorem 2.5.11 but first prove a lemma.

**Lemma 2.5.10.** *If $G$ acts transitively on $\Omega$, then all subgroups $G_\alpha$ of $G$ (for $\alpha \in \Omega$) are conjugate in $G$.*

**Proof:** Let $\alpha, \beta \in \Omega$. Then $\beta = \alpha^h$ for some $h \in G$.

Now

$$\begin{aligned} g \in G_\alpha &\Leftrightarrow \alpha^g = \alpha \\ &\Leftrightarrow \beta^{h^{-1}g} = \beta^{h^{-1}} \\ &\Leftrightarrow \beta^{h^{-1}gh} = \beta \\ &\Leftrightarrow h^{-1}gh \in G_\beta \\ &\Leftrightarrow g \in hG_\beta h^{-1} \ , \\ \text{so} \quad G_\alpha &= hG_\beta h^{-1} \text{ as required} \quad \square \end{aligned}$$

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**Theorem 2.5.11.** *Let $H \leq G$ and $\chi = (1_H)^G$ then*

1. $\chi(1)$ divides $|G|$
2. $< \chi, \psi > \leq \psi(1)$ for all $\psi \in Irr(G)$
3. $< \chi, 1_G > = 1$
4. $\chi(g)$ is a nonnegative integer for all $g \in G$
5. $\chi(g) \leq \chi(g^m)$ for all $g \in G$ and $m$ a nonnegative integer
6. $\chi(g) = 0$ if order of $g$ does not divide $\frac{|G|}{\chi(1)}$

7. $\chi(g)\frac{|[g]|}{\chi(1)}$ is an integer for all $g \in G$

**Proof:**

1. $\chi(1) = [G : H]$ and $[G : H]||G|$

2. $< \chi, \psi > \ = \ < (1_H)^G, \psi >_G \ = \ < 1_H, \psi \downarrow H >_H \ \leq \psi(1)$, by Frobenius Reciprocity Theorem.

3. $G$ acts transitively on the set of all right cosets of $H$ in $G$, by $(Ha)^g = Hag$. This action gives rise to the permutation character $\chi = (1_H)^G$ with $deg\chi = [G : H]$. Therefore $< \chi, 1_G >= 1$ by corollary 2.5.9.

4. $\chi(g)$ is the number of points of $\Omega$ fixed by $g$, so must be a nonnegative integer.

5. For any $\alpha_i \in \Omega, \alpha_i^g = \alpha_i \Rightarrow \alpha_i^{g^m} = \alpha_i$ and so $\chi(g) \leq \chi(g^m)$ i.e the number of points of $\Omega$ fixed by $g$ cannot exceed the number of points fixed by $g^m$.

6. If $ord(g)$ does not divide $\frac{|G|}{\chi(1)} = |H| \quad (\chi(1) = [G : H] = \frac{|G|}{|H|})$ then no conjugate of $g$ lies in $H$).
   Therefore,

$$\begin{aligned} \chi(g) &= (1_H)^G(g) \\ &= \sum_{i=1}^{r} (1_H)^0(x_i g x_i^{-1}) \\ &= 0 \end{aligned}$$

7. Let $\mathcal{S} = \{(\alpha, x) | \alpha \in \Omega, x \in [g], \alpha^x = \alpha\}$. If $x \in [g]$ then $\chi(x) =$ number of points in $\Omega$ fixed by $x$. Therefore $|\mathcal{S}| = \sum_{x \in [g]} \chi(x)$.
   But $\chi(x) = \chi(y)$ if x $\sim$ y (i.e. if $x, y \in [g]$ ) and so $|\mathcal{S}| = |[g]|\chi(g)$. However $|\mathcal{S}| = \sum_{\alpha \in \Omega} |[g] \cap G_\alpha|$ and for any $\alpha, \beta \in \Omega$, define $\Phi : [g] \cap G_\alpha \rightarrow [g] \cap G_\beta$ by $x \mapsto hxh^{-1}$ where $G_\beta = hG_\alpha h^{-1}$ then $\Phi$ is a bijection. And so for any $\alpha, \beta \in \Omega$, $|[g] \cap G_\alpha| = |[g] \cap G_\beta| = m$, say. Hence $|\mathcal{S}| = |\Omega|m = |[g]|\chi(g)$.
   Therefore, $m = \frac{\chi(g)|[g]|}{|\Omega|} = \frac{\chi(g)|[g]|}{\chi(1)}$ $\square$

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**Theorem 2.5.12.** *Let $H \leq G$ with $\chi = (1_H)^G$. Let $g \in G$ and let $x_1, x_2, ..., x_m$ be representatives of the conjugacy classes of $H$ that fuse to $[g]$. Then*

$$\chi(g) = \sum_{i=1}^{m} \frac{|C_G(g)|}{|C_H(x_i)|} \ .$$

*(If $H \cap [g] = \Phi$, then $\chi(g) = 0$)*

**Proof:** This follows from Theorem 2.4.5. $\square$

# Chapter 3

# Conjugacy Classes of Group Extensions

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In this chapter we describe a method that can be used to determine the conjugacy classes of group extensions. We first restrict ourselves to split extensions of abelian groups. These methods were used by Moori ([31],[32]), Salleh [40], Whitley [42], Mpono [35] and Ali [1]to determine the conjugacy classes of extensions of elementary abelian groups.

## 3.1 Extensions of Groups

**Definition 3.1.1.** If $K$ and $Q$ are groups, an *extension* of $K$ by $Q$ is a group $G$ such that

(i) $K \trianglelefteq G$

(ii) $G/K \cong Q$

We denote the fact that $G$ is an extension of $K$ by $Q$ by $G = K.Q$.

**Definition 3.1.2.** If $G$ is an extension of $K$ by $Q$ such that there exists a subgroup $Q_1$ of $G$ satisfying

(i) $Q_1 \cong Q$

(ii) $KQ_1 = G$

(iii) $K \cap Q_1 = \{1\}$,

then we say that $G$ is a split extension and we denote this fact by $G = K : Q$. If an extension is not split , then it is called non-split and is denoted by $K \cdot Q$.

**Remark 3.1.3.** If $G$ is a split extension of $K$ by $Q$ , then $G$ is also called a semi-direct product of $K$ by $Q$ and we identify $Q$ and $Q_1$.

## 3.2 Conjugacy classes of semi-direct products.

Let $G$ be a *semi-direct product* of $K$ by $Q$ where $K$ is abelian . Then every $y \in G$ has a unique expression of the form $y = kx$, $k \in K$, $x \in Q$. For suppose $y = k_1\, x_1 = k_2\, x_2$, then $k_2^{-1}\, k_1 = x_2\, x_1^{-1}$; hence $x_2\, x_1^{-1}$, $k_2^{-1}\, k_1 \in K \cap Q = \{1\}$ and so $k_1 = k_2$ and $x_1 = x_2$. It is clear that $\bigcup_{x \in Q} Kx \subseteq G$. For any $g \in G$, $g = kx$ for some $k \in K$, $x \in Q$.

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Hence $g \in Kx$ for some $x \in Q$ and so $G \subseteq \bigcup_{x \in Q} Kx$. Therefore $G = \bigcup_{x \in Q} Kx$ and furthermore, suppose $z \in Kx \cap Ky$ for any two elements $x, y \in Q$. Then $z = k_1\, x = k_2\, y$ and so $k_1 = k_2$ and $x = y$, that is, $x \neq y$ implies that $Kx \cap Ky = \emptyset$ and so $Q$ can be regarded as a *right transversal* for $K$ in $G$. We therefore only need to consider one coset $Kx$ for each conjugacy class of $Q$ with representative $x$. For $x \in Q$, define $C_x = \{y \in G \,|\, (Kx)^y = Kx\} = \{y \in G \,|\, y(Kx) = (Kx)y\} = C_G(Kx)$. Now $C_x$ is a subgroup of $G$ because $C_G(H)$ is a subgroup of $G$ for any subset $H$ of $G$. The subgroup $C_x$ is the stabilizer of $Kx$ in $G$ under the conjugation action.

**We now prove** $(i)$ $K \trianglelefteq C_x$ **and** $(ii)$ $C_x = K : C_Q(x)$

(i) $\forall\, k \in K$, $k_1 x \in Kx$,

$(k_1 x)^k = k(k_1 x)k^{-1} = kk_1 xk^{-1}x^{-1}x \in Kx$, which implies that $(Kx)^k = Kx$ and thus $K \subseteq C_x$ and so $K \leq C_x$. For all $y \in C_x$, $K^y = K$ since $K \trianglelefteq G$; thus $K \trianglelefteq C_x$ .

(ii) If $y \in C_Q(x)$ then $y(Kx) = yKy^{-1}yx = Kyx = Kxy = (Kx)y$; so $C_Q(x) \leq C_x$ and since $K \cap Q = \{1\}$, it follows that $K \cap C_Q(x) = \{1\}$.

Since $K \trianglelefteq C_x$ and $C_Q(x) \leq C_x$, it follows that $KC_Q(x) \leq C_x$. For any $y \in C_x$, $(Kx)^y = Kx$

$\Leftrightarrow Kx^y = Kx \Leftrightarrow x^y x^{-1} \in K$. Now $y = k'q'$ for some $k' \in K$, $q' \in Q$ and so

$$\begin{aligned} x^y x^{-1} &= k'q'x(k'q')^{-1}x^{-1} \\ &= k'q'xq'^{-1}k'^{-1}x^{-1} \in K \Leftrightarrow q' \in C_Q(x) \end{aligned}$$

For if $q' \in C_Q(x)$ then $k'q'xq'^{-1}k'^{-1}x^{-1} = k'xq'q'^{-1}k'^{-1}x^{-1} = k'xk'^{-1}x^{-1} \in K$. Conversely if $k'q'xq'^{-1}k'^{-1}x^{-1} \in K$ then $q'xq'^{-1}x^{-1}xk'^{-1}x^{-1} \in K$. Therefore $q'xq'^{-1}x^{-1} \in K \cap Q = \{1\}$ and so $q'x = xq'$ which implies $q' \in C_Q(x)$. This proves that $y = k'q' \in C_x \Leftrightarrow q' \in C_Q(x)$. Therefore $C_x \leq KC_Q(x)$ and so $C_x = KC_Q(x)$; that is, $C_x = K : C_Q(x)$, a semi-direct product of $K$ by $C_Q(x)$. $\square$

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Now $C_x = \{y \in G \,|\, (Kx)^y = Kx\}$ and so $C_x$ acts on $Kx$ by conjugation. It follows that $K$ and $C_Q(x)$ acts on $Kx$. We consider the *action of $K$ and $C_Q(x)$ on $Kx$* separately.

1. **Action of $K$ on $Kx$ by conjugation**

   Let $z \in Kx$, then under the action of $K$ on $Kx$, $K_z = \{k \in K \,|\, kz = zk\} = C_K(z)$, the stabilizer of $z$ in $K$. Now $C_K(x) = C_K(z)$, for if $k \in C_K(x)$ then $kz = k(k'x)$ for some $k' \in K$; hence $kz = k'(kx)$, since $K$ is abelian. But then $kz = k'(xk) = (k'x)k = zk$, because $k \in C_K(x)$, and this proves that $k \in C_K(z)$, so $C_K(x) \subseteq C_K(z)$ .

   Conversely, if $k \in C_K(z)$, then $kx = kk'^{-1}k'x = kk'^{-1}z = k'^{-1}kz$, since $K$ is abelian, so $kx = k'^{-1}zk$, because $k \in C_K(z)$. This shows that $kx = k'^{-1}k'xk = xk$ and $k \in C_K(x)$. Therefore $C_K(z) \subseteq C_K(x)$; so we have equality $C_K(z) = C_K(x)$ and $C_K(x) \leq K$.

Now $z^K = \{z^k \,|\, k \in K\} = \{kzk^{-1} \,|\, k \in K\} = Q_z$ and under the action of $K$ on $Kx$, $Kx$ splits into orbits $Q_{z_1}, \cdots, Q_{z_l}$ where $|Q_{z_i}| = \dfrac{|K|}{|C_K(z_i)|} = \dfrac{|K|}{|C_K(x)|} = [K : C_K(x)]$. Let $|C_K(x)| = l$. Then as $K$ acts on $Kx$, $Kx$ splits into $l$ orbits $Q_{z_1}, Q_{z_2}, \cdots, Q_{z_l}$, that is, $Kx = \bigcup_{i=1}^{l} Q_{z_i}$ and for each $i$, $1 \leq i \leq l$, $|Q_{z_i}| = [K : C_K(x)] = \dfrac{|Kx|}{l}$, $1 \leq i \leq l$.
Equivalently, $|Kx| = |K| = l\,|Q_{z_i}|$ for $1 \leq i \leq l$.

2. **Action of $C_Q(x)$ on $Kx$**

From (1) above, the elements of $Kx$ are in the orbits $Q_{z_1}, \cdots, Q_{z_l}$; thus we act $C_Q(x)$ on these orbits. Suppose under this action that $f$ of the orbits $Q_{z_1}, \cdots, Q_{z_l}$ fuse together to form an orbit $\triangle_f$ of $C_Q(x)$.
Then $|\triangle_f| = f\frac{|K|}{l}$. Let $y \in \triangle_f$, then the stabilizer in $C_x$ of $y$ is

$$(C_x)_y = \{g \in C_x \,|\, gy = yg\} = C_G(y).$$

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For $(Kx)^G = Kx^G = \{Ky | y \in [x]\}$. Therefore $|\triangle_f| = \dfrac{|C_x|}{|C_G(y)|} = \dfrac{|K|\,|C_Q(x)|}{|C_G(y)|}$ and hence

$$\begin{aligned} |C_G(y)| &= \frac{|K|\,|C_Q(x)|}{|\triangle_f|} \\ &= \frac{l\,|K|\,|C_Q(x)|}{l|\triangle_f|} \\ &= \frac{l\,|K|\,|C_Q(x)|}{f|K|} \\ &= \frac{l}{f}|C_Q(x)| \end{aligned}$$

Thus to compute the conjugacy classes of $G = K : Q$ we just need to find the values of $l$ and $f$ for each conjugacy class representative $x$ of $Q$.

## 3.3 Conjugacy classes of group extensions (not necessarily split)

Now suppose that $G$ is any extension of $K$ by $Q$, not necessarily split, then $G/K \cong Q$. Hence there is an onto homomorphism $\lambda : G \longrightarrow Q$ with kernel $K$. For $g \in Q$ define a *lifting of* $g$ to be an element $\bar{g} \in G$ such that $\lambda(\bar{g}) = g$. Then choosing a lifting of each element of $Q$, we get the set $\{\bar{g} : g \in Q\}$ which is a transversal for $K$ in $G$(that is, a complete set of right coset representatives of $K$ in $G$). We now show that even for a non-split extension of $K$ by $Q$ , if $K$ is abelian, $Q$ acts on $K$ ,that is, $\exists$ a homomorphism $\theta : Q \longrightarrow Aut(K)$. We first prove the following result.

**Lemma 3.3.1.** *Let $G$ be an extension of $K$ by $Q$ ,with $K$ abelian.Then there is a homomorphism $\theta : Q \to Aut(K)$ such that $\theta_g(k) = \bar{g}k\bar{g}^{-1}(k \in K)$, and $\theta$ is independent of the choice of liftings $\{\bar{g} : g \in Q\}$.*

**Proof:** For $a \in G$, define $\gamma_a : G \longrightarrow G$ by $\gamma_a(x) = axa^{-1}$. Since $K \trianglelefteq G$, $\gamma_a|_K \in Aut(K)$ and the function $\mu : G \longrightarrow Aut(K)$ defined by $\mu(a) = \gamma_a|_K$ is a homomorphism.

If $a \in K$ , then $\mu(a) = \gamma_a|_K$ where $\gamma_a|_k : k \longrightarrow aka^{-1} = kaa^{-1} = k \quad \forall k \in K$; so $\gamma_a|_K = 1_K$, since $K$ is abelian. Define $\mu^* : G/K \longrightarrow Aut(K)$ by $\mu^*(Ka) = \mu(a)$. If $Ka = Ka'$ then $Kaa'^{-1} = K$; so $aa'^{-1} \in K$. But then $\mu(aa'^{-1}) = 1_K$, as above, which implies $\mu(a)\mu(a'^{-1}) = 1_K$and $\mu(a) = \mu(a')$. But then $\mu^*(Ka) = \mu^*(Ka')$ and so $\mu^*$ is well-defined. Furthermore, $\mu^*(KaKa') = \mu^*(Kaa') = \mu(aa') = \mu(a)\mu(a') = \mu^*(Ka)\mu^*(Ka')$ ; therefore $\mu*$ is a homomorphism.

Now $Q \cong G/K$ and for any set of liftings $\{\bar{g} : g \in Q\}$, the map $\phi : Q \longrightarrow G/K$ defined by $\phi(g) = K\bar{g}$ is an isomorphism. If $\{\bar{g}' : g \in Q\}$ is another choice of liftings, then $\lambda(\bar{g}) = \lambda(\bar{g}')$, where $\lambda : G \longrightarrow Q$ is a homomorphism with kernel $K$ , implies that $\lambda(\bar{g}\bar{g}'^{-1}) = 1$ ; $\bar{g}\bar{g}'^{-1} \in K$ and $K\bar{g} = K\bar{g}'$. Therefore, $\phi$ is independent of the choice of liftings. Now let $\theta : Q \to Aut(K)$ be the composite map $\mu^* \circ \phi$. If $g \in Q$ and $\bar{g}$ is a lifting , then $\theta(g) = \mu^* \circ \phi(g) = \mu^*(\phi(g)) = \mu*(K\bar{g}) = \mu(\bar{g}) \in Aut(K)$,

so for $k \in K$, $\theta_g(k) = \mu(\bar{g})(k) = \bar{g}k\bar{g}^{-1}$, as required. $\square$

**Conjugacy Classes of $G = K \cdot Q$ ($K$ abelian).**

To determine the conjugacy classes of $G$ , we analyse the cosets $K\bar{g}$, where $G = \bigcup_{g\in Q} K\bar{g}$ . It is only necessary to consider one coset $K\bar{g}$ for each conjugacy class of $Q$ with representative $g$, and the corresponding classes of $G$ are determined by the action (by conjugation) of $C_{\bar{g}}$, the *set stabilizer in $G$ of $K\bar{g}$*; that is, $C_{\bar{g}} = \{x \in G | x(K\bar{g}) = (K\bar{g})x\} = \{x \in G | xk\bar{g}x^{-1} \in K\bar{g}, \ \ \forall k \in K\}$. Now $K \subseteq C_{\bar{g}}$ , since for $k \in K$ and $k_1\bar{g} \in K\bar{g}$, $k(k_1\bar{g})k^{-1} = kk_1\bar{g}k^{-1}\bar{g}^{-1}\bar{g} = kk_1(k^{-1})^{\bar{g}}\bar{g} \in K\bar{g}$. Therefore $K \trianglelefteq C_{\bar{g}}$ and we have $C_{\bar{g}}/K = C_{G/K}(K\bar{g})$ because

$$
\begin{aligned}
Kh \in C_{G/K}(K\bar{g}) &\iff KhK\bar{g}(Kh)^{-1} = K\bar{g} \\
&\iff KhK\bar{g}Kh^{-1} = K\bar{g} \\
&\iff KhK\bar{g}K\bar{g}^{-1}\bar{g}h^{-1} = K\bar{g} \\
&\iff KhK\bar{g}h^{-1} = K\bar{g} \\
&\iff KhKk\bar{g}h^{-1} = K\bar{g} \quad \forall\ k \in k \\
&\iff KhKh^{-1}hk\bar{g}h^{-1} = K\bar{g} \quad \forall\ k \in k \\
&\iff Khk\bar{g}h^{-1} = K\bar{g} \\
&\iff hk\bar{g}h^{-1} \in K\bar{g} \quad \forall\ k \in K \\
&\iff h \in C_{\bar{g}} \\
&\iff Kh \in C_{\bar{g}}/K
\end{aligned}
$$

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Therefore, $C_{\bar{g}}/K = C_{G/K}(K\bar{g}) = C_Q(g)$, identifying $C_{G/K}(K\bar{g})$ and $C_Q(g)$. This shows that $C_{\bar{g}}$ is an extension of $K$ by $C_Q(g)$, that is, $C_{\bar{g}} = K.C_Q(g)$.

**Remark 3.3.2.** If $G = K : Q$ we can identify $C_{\bar{g}} = K \cdot C_Q(g)$ with $C_g = \{y \in G | y(Kg) = (Kg)y\}$, where the lifting of $g$ in $G$ is $g$ itself since $Q \leq G$ in the case of a split extension.

Next we determine the *orbits* of $C_{\bar{g}}$ on $K\bar{g}$. Let $z \in K\bar{g}$. Then under the action

of $K$ on $K\bar{g}$, $K_z = \{k \in K | z^k = z\} = C_K(z)$, is the stabilizer in $K$ of $z$. Then for any $kz \in K\bar{g}$ $(k \in K)$, $(kz)^y = k^y z^y = yky^{-1}yzy^{-1} = kyy^{-1}yzy^{-1} = kyzy^{-1} = kzyy^{-1} = kz$, for $y \in C_K(z)$, since $K$ is abelian. Therefore $C_K(z)$ fixes each element in $K\bar{g}$.

Let $l = |C_K(z)|$. Then $|[z]| = \frac{|K|}{|C_K(z)|} = \frac{|K|}{l}$, that is, under conjugation by $K$, each element of $K\bar{g}$ is conjugate to $\frac{|K|}{l}$ elements of $K\bar{g}$, so $K\bar{g}$ splits into $l$ blocks with $\frac{|K|}{l}$ elements in each block. Denote these blocks by $Q_1, \cdots, Q_l$. The orbits of $C_{\bar{g}}$ (that is, the conjugacy classes of $K\bar{g}$) are unions of these blocks which fuse together by the action of $C_{\bar{g}}$. Since $C_{\bar{g}} = K.C_Q(g)$, this fusion is completely determined by the action of $\{\bar{y} | y \in C_Q(g)\}$ (there is a homomorphism $\lambda : C_{\bar{g}} \to C_Q(g)$ with kernel $K$; $\bar{y} \mapsto y$). For suppose $Q_i$ and $Q_j$ fuse $(i \neq j)$. Then there exist $k_1\bar{g} \in Q_i,\ k_2\bar{g} \in Q_j$ such that $(k_1\bar{g})^l = k_2\bar{g}$ for some $l \in C_{\bar{g}}$.

But $l \in C_{\bar{g}}$ implies that $l = k\bar{y}$ for some $k \in K,\ y \in C_Q(g)$. So $(k_1\bar{g})^{k\bar{y}} = k_2\bar{g}$ implies that $((k_1\bar{g})^k)^{\bar{y}} = k_2\bar{g}$. Now $(k_1\bar{g})^k \in Q_i$, so by the action of $\bar{y}$, $Q_i$ and $Q_j$ have fused. Suppose $f$ blocks fuse to form an orbit $\Omega$ of $C_{\bar{g}}$. Then $|\Omega| = \frac{f.|K|}{l}$. Let $y \in \Omega$. Then the stabilizer in $C_{\bar{g}}$ of $y$ is $C_G(y)$, so $|\Omega| = \frac{|C_{\bar{g}}|}{|C_G(y)|} = \frac{|K||C_Q(g)|}{|C_G(y)|}$.

Therefore $|C_G(y)| = \frac{|K||C_Q(g)|}{|\Omega|} = \frac{l|K||C_Q(g)|}{f|K|} = \frac{l}{f}|C_Q(g)|$. So to calculate the conjugacy classes of $G$ we need to find the values of $l$ and $f$ for each conjugacy class of $Q$. Note that the values of $l$ can be determined from the action of $Q$ on $K$ given in lemma 3.3.1. Consider a class representative $g$ of $Q$. For this class, $l$ is the number of elements of $K$ that fix $z$ for $z \in K\bar{g}$. Take $z = \bar{g}$. Now for $k \in K$, $k$ fixes $\bar{g}$ $\Leftrightarrow \bar{g}^k = \bar{g} \Leftrightarrow k\bar{g}k^{-1} = \bar{g} \Leftrightarrow k\bar{g} = \bar{g}k \Leftrightarrow k = \bar{g}k\bar{g}^{-1} \Leftrightarrow k = k^{\bar{g}} \Leftrightarrow k = k^g$. Therefore $l$ is the number of elements of $K$ fixed by $g$, which equals $\chi(g)$ where $\chi$ is the permutation character of the action of $Q$ on $K$.

**Theorem 3.3.3.** [35] *Let $G = K : Q$ and $dg \in G$ where $d \in K$ and $g \in Q$ such that $o(g) = m$ and $o(dg) = k$. Then $m$ divides $k$.*

**Proof:** We have that

$$1_G = (dg)^k = dd^g d^{g^2} d^{g^3} ... d^{g^{k-1}} g^k \quad .$$

Since $Q$ acts on $K$ and $d \in K$, we have $d, d^g, d^{g^2}, d^{g^3}, ..., d^{g^{k-1}} \in K$. Hence $dd^g d^{g^2} d^{g^3} ... d^{g^{k-1}} \in K$. Thus we have that $dd^g d^{g^2} d^{g^3} ... d^{g^{k-1}} = 1_K$ and $g^k = 1_Q$. Hence $m$ divides $k$. $\square$

**Theorem 3.3.4.** *Let $G = K : Q$ such that $K$ is an elementary abelian $p$-group, where $p$ is prime. Let $dg \in G$ where $d \in K$ and $g \in Q$ such that $o(g) = m$ and $o(dg) = k$. Then either $k = m$ or $k = pm$.*

**Proof:** See [35, *Theorem*2.3.10].

**Remark 3.3.5.** Let $G = K : Q$ where $K$ is an elementary abelian $p$-group, where $p$ is prime. Let $dg \in G$ with $d \in K$, $g \in Q$ such that $o(g) = m$ and $o(dg) = k$, then we observe that

$$1_G = (dg)^m = dd^g d^{g^2} d^{g^3} ... d^{g^{m-1}} g^m \quad .$$

Since $g^m = 1_Q$, we obtain that $(dg)^m = w$, where $w \in K$ and is given by

$$w = dd^g d^{g^2} d^{g^3} ... d^{g^{m-1}} \quad .$$

By Theorem 3.2.4 above , we have that if $w = 1_K$ then $k = m$ and if $w \neq 1_K$ then $k = pm$.

By using the method of coset analysis(discussed earlier) together with Theorems 3.3.3 and 3.3.4 and Remark 3.3.5, Ali[1] developed Programmes A and B (see Appendix) in MAGMA [7] to compute the conjucacy classes and the orders of the class representatives of the extension $G = K : Q$ where $K$ is an elementary abelian $p$ - group for prime $p$ on which a linear group $Q$ acts.

# Chapter 4

# Clifford Theory

If $G$ is an extension of $K$ by $Q$, then Fischer showed how the character table of $G$ can be determined by constructing a matrix corresponding to each conjugacy class of $Q$. The character table of $G$ can then be determined from these matrices ( the so–called clifford matrices ) and the character tables of certain subgroups of $Q$ called the *inertia factors*.

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In this thesis we describe how the method of the Fischer–Clifford matrices is applied in the case of extensions of elementary abelian groups. However this method also applies to extensions of any normal subgroup $K$ with the property that each character of $K$ can be extended to its inertia group. The theoretical foundation for this method is the Clifford theory and the theory of the Fischer matrices.

In this chapter we discuss the Clifford theory which will be applied to describe the Fischer matrices method in the next chapter. We refer the reader to Moori [33] for the definitions and results not given here.

## 4.1 Clifford's Theorem

Let $G = K \cdot Q$ be the extension of $K$ by $Q$. Here $K$ is any group, not necessarily abelian.

Let $\theta \in Irr(K)$ be an irreducible character of $K$. Define $\theta^g$ by $\theta^g(k) = \theta(gkg^{-1})$ for $g \in G$, $k \in K$.

Let $P$ be a representation of $K$ affording $\theta$, that is, $P : K \longrightarrow GL(n, \mathbb{F})$ is a homomorphism such that $\chi_p = \theta$. Then

$$\chi_{p^g}(k) = tr(P^g(k)) = tr(P(gkg^{-1})) = \chi_p(gkg^{-1}) = \theta(gkg^{-1}) = \theta^g(k)$$

for all $k \in K$. Therefore, $\chi_{p^g} = \theta^g$ and furthermore $\theta \in Irr(K)$ implies $\theta^g \in Irr(K)$ because $< \theta^g, \theta^g >_K = < \theta, \theta >_K = 1$ (Prop. v.5(iii), [33] ).

Moreover, $\theta^{k'}(k) = \theta(k'kk'^{-1}) = \theta(k)$ (since $k \sim k'kk'^{-1}$ in $K$, $\theta(k) = \theta(k'kk'^{-1})$) and therefore $\theta^{k'} = \theta$ for all $k' \in K$, that is, $K$ *acts trivially on* $Irr(K)$.

**Remark 4.1.1.** $P^g : K \longrightarrow GL(n, \mathbb{F})$ defined by $P^g(k) = P(gkg^{-1})$ is a representation of $K$ affording $\theta^g$. This is because $\forall k_1, k_2 \in K$, $P^g(k_1k_2) = P(gk_1k_2g^{-1}) = P(gk_1g^{-1}gk_2g^{-1}) = P(gk_1g^{-1})\,P(gk_2g^{-1}) = P^g(k_1)\,P^g(k_2)$.

Since $\theta^1(k) = \theta(1k1) = \theta(k)$, $\forall k \in K$, $\theta^1 = \theta$. Moreover we have $\theta^{gg'} = (\theta^g)^{g'}$ (Prop.v.5(ii), [33]). It follows that $G$ acts on $Irr(K)$ with $G_\theta = \{g \in G | \theta^g = \theta\}$, the stabilizer of $\theta$ in $G$. Denote $G_\theta$ by $I_G(\theta)$ and call it the *inertia group of* $\theta$ *in* $G$.

**Remark 4.1.2.** The action of $G$ on $Irr(K)$ determines a partition of $Irr(K)$ by the orbits $\theta^G$ for $\theta \in Irr(K)$, that is,

$$Irr(K) = \bigcup_{\theta \in Irr(K)} \theta^G$$

and $\theta^G \cap \phi^G \neq \emptyset \Rightarrow \theta^G = \phi^G$ for any $\theta$, $\phi \in Irr(K)$.

Now $I_G(\theta)$ is a subgroup of $G$ and $K \leqslant I_G(\theta)$ since $K$ acts trivially on $Irr(K)$, that is, $\theta^k = \theta\ \forall k \in K$. Also $|\theta^G| = |\{\theta^g \,|\, g \in G\}| = [G : I_G(\theta)]$, that is, the size of the orbit $\theta^G = \{\theta^g \,|\, g \in G\}$ containing $\theta$ is $[G : I_G(\theta)]$, the index of the subgroup $I_G(\theta)$ in $G$. We say that $\theta$ *extends to an irreducible character of* $H = I_G(\theta)$ if there exists $\phi \in Irr(H)$ such that $\theta = \phi \downarrow K$.

**Theorem 4.1.3.** ([9, Theorem 3.3.1] , [20]) (**Clifford's Theorem**) *Let $K \trianglelefteq G$ and $\chi \in Irr(G)$. Let $\theta$ be an irreducible constituent of $\chi \downarrow K$, that is, $\theta \in Irr(K)$ and $< \theta, \chi \downarrow K >_K \neq 0$.*
*Then*

$$\chi \downarrow K = c \sum_{i=1}^{t} \theta_i$$

*where $\theta = \theta_1, \theta_2, \cdots, \theta_t$ are the distinct conjugates of $\theta$ in $G$ and $c$ is a constant such that*
$c =< \chi \downarrow K, \theta >_K$

**Proof:** We compute $\theta^G \downarrow K$. Define $\theta^\circ$ on $G$ by

$$\theta^\circ(x) = \begin{cases} \theta(x) & if \quad x \in K \\ 0 & if \quad x \notin K \end{cases}$$

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Let $k \in K$. Then

$$\theta^G(k) = |K|^{-1} \sum_{x \in G} \theta^\circ(xkx^{-1}) = |K|^{-1} \sum_{x \in G} \theta(xkx^{-1}),$$

since $xkx^{-1} \in K$ for all $x \in G$ (Prop.iv.2.3, [33]). Therefore,

$$\theta^G(k) = |K|^{-1} \sum_{x \in G} \theta^x(k) \text{ and hence } \theta^G \downarrow K = |K|^{-1} \sum_{x \in G} \theta^x$$

Now if $\phi \in Irr(K)$ and $\phi \notin \{\theta = \theta_1, \theta_2, \cdots, \theta_t\}$, then $< \phi, \theta^x >_K = 0 \ \forall x \in G$. Therefore

$$\left\langle \sum_{x \in G} \theta^x, \phi \right\rangle_K = 0,$$

whence $< \theta^G \downarrow K, \phi >_K = 0$. Using the Frobenius Reciprocity Theorem (Theorem

2.4.4) we get

$$0 =< \theta^G \downarrow K, \phi >_K =< \theta^G, \phi^G >_G \text{ and } 0 \neq < \theta, \chi \downarrow K >_K =< \theta^G, \chi >_G .$$

Then $< \chi, \phi^G >_G = 0$, for if $< \chi, \phi^G > \neq 0$ then $\chi$ is a constituent of $\phi^G$, but then $< \theta^G, \phi^G >_G \neq 0$ because $\chi$ is a constituent of $\theta^G$, contradicting $< \theta^G, \phi^G >_G = 0$.

Therefore $< \chi \downarrow K, \phi >_K =< \phi^G, \chi >_G = 0$ for all $\phi \in Irr(K) \backslash \{\theta = \theta_1, \cdots, \theta_t\}$, again by the Frobenius Reciprocity Theorem. Thus all the irreducible constituents of $\chi \downarrow K$ are among the $\theta_i$, so

$$\chi \downarrow K = \sum_{i=1}^{t} < \chi \downarrow K, \theta_i >_K \theta_i$$

But $< \chi \downarrow K, \theta_i >_K =< \chi \downarrow K, \theta >_K = c$, for all $i = 1, 2, \cdots, t$ because $\theta_i$ and $\theta$ are conjugate (Prop.v.5(iv), [33]). Thus

$$\chi \downarrow K = \sum_{i=1}^{t} c\,\theta_i = c \sum_{i=1}^{t} \theta_i$$

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□

**Remark 4.1.4.** In the above formula $\chi \downarrow K = c \sum_{i=1}^{t} \theta_i$, we have $t = [G : I_G(\theta)]$. As a consequence of Clifford's Theorem we have the following result.

**Theorem 4.1.5.** [42] *Let $K \trianglelefteq G$, $\theta \in Irr(K)$ and $H = I_G(\theta)$. Then induction to $G$ maps the irreducible characters of $H$ that contain $\theta$ in their restriction to $K$ faithfully onto the irreducible characters of $G$ which contain $\theta$ in their restriction to $K$.*

**Proof:** Let $\mathcal{A} = \{\psi \in Irr(H) \mid < \psi \downarrow K, \theta > \neq 0\}$, $\mathcal{B} = \{\chi \in Irr(G) \mid < \chi \downarrow K, \theta > \neq 0\}$. Define the mapping $\Phi : \mathcal{A} \longrightarrow \mathcal{B}$ by $\psi \mapsto \psi^G$ where $\psi^G$ is the character of $G$ induced by $\psi$.

For $\psi \in \mathcal{A}$ we first show that

(i) $\psi^G \in Irr(G)$

(ii) $< \psi^G \downarrow K, \theta > \neq 0$

(iii) $< \psi \downarrow K, \theta > = < \psi^G \downarrow K, \theta >$.

(i) Let $\chi$ be an irreducible constituent of $\psi^G$, that is, $\chi \in Irr(G)$ and $< \chi, \psi^G >_G \neq 0$. Now $0 \neq < \chi, \psi^G >_G \;\; = \;\; < \psi, \chi \downarrow H >_H$, by Frobenius Reciprocity Theorem and so $\psi$ is an irreducible constituent of $\chi \downarrow H$. Thus
$\chi \downarrow H = \cdots + \lambda\psi + \cdots$, $\lambda \geq 1$, and therefore

$$\chi \downarrow K = \cdots \lambda\psi \downarrow K + \cdots \;\; = \;\; \cdots \lambda(\cdots + \delta\theta + \cdots) \;\; = \;\; \cdots + \lambda\delta\theta + \cdots, \; \delta \geq 1$$

which shows that $< \chi \downarrow K, \theta > \neq 0$. Since $\chi \in Irr(G)$, it follows that $\chi \in \mathcal{B}$. We show that $\chi = \psi^G$.
By Clifford's theorem

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$$\chi \downarrow K = e \sum_{i=1}^{t} \theta_i$$

where $\theta = \theta_1, \theta_2, \cdots, \theta_t$ are the distinct conjugates of $\theta$ in $G$ and $e$ is a constant such that
$e = < \chi \downarrow K, \theta >_K$ and $t = [G : I_G(\theta)] = |\theta^G|$.
Therefore

$$\chi(1) = (\chi \downarrow K)(1) = e \sum_{i=1}^{t} \theta_i(1) = e \cdot t \cdot \theta(1) \tag{4.1.1}$$

because $\theta^g(1) = \theta(g1g^{-1}) = \theta(1) \; \forall g \in G$. Now $K \trianglelefteq H$, $\psi \in Irr(H)$ and $< \psi \downarrow K, \theta > \neq 0$, that is, $\theta$ is an irreducible constituent of $\psi \downarrow K$. Therefore, again by Clifford's Theorem

$$\psi \downarrow K = f\theta \tag{4.1.2}$$

for some constant $f$ since $\{\theta^h \mid h \in H = I_G(\theta)\} = \{\theta\}$, and thus $< \psi \downarrow K, \theta >= f$. As before $\chi \downarrow H = \cdots + \lambda\psi + \cdots$, $\lambda \geq 1$, therefore

$$\chi \downarrow K \;=\; \cdots + \lambda(\psi \downarrow K) + \cdots \;=\; \cdots + \lambda(\cdots + f\,\theta + \cdots) \;=\; \cdots + \lambda f\,\theta + \cdots$$

and so

$$e =< \chi \downarrow K, \theta >_K = \lambda f \geq f \text{ since } \lambda \geq 1 \tag{4.1.3}$$

Also $0 \neq < \psi^G, \chi >_G$ implies

$$\psi^G = \cdots + \delta\chi + \cdots, \ (\delta \geq 1) \tag{4.1.4}$$

and hence $\psi^G(1) = \cdots + \delta\chi(1) + \cdots \geq \chi(1) = e \cdot t \cdot \theta(1)$ by (4.1.1). But $\psi^G(1) = [G : H]\psi(1) = t\,f\,\theta(1)$ by (4.1.2) and Defn.iv.2.2 [33]. Therefore $t\,f\,\theta(1) \leq t\,e\,\theta(1) = \chi(1)$, since $f \leq e$ by 4.1.3.

Since $e\,t\,\theta(1) = \chi(1) \leq \psi^G(1) = t\,f\,\theta(1) \leq t\,e\,\theta(1) = \chi(1)$, it follows that $\chi(1) = \psi^G(1)$ and $e = f$. That is,

$$e =< \chi \downarrow K, \theta >=< \psi \downarrow K, \theta >= f \tag{4.1.5}$$

Also $0 \neq < \psi^G, \chi >_G$ implies that $\psi^G = \lambda_1\chi + \lambda_2\chi_2 + \cdots$ and so $\chi(1) = \psi^G(1) = \lambda_1\chi(1) + \lambda_2\chi_2(1) + \cdots$ Hence $\lambda_1 = 1, \lambda_2 = \lambda_3 = \cdots = 0$, which proves that $\psi^G = \chi$.
(ii) Restating (4.1.5) we get

$$< \psi^G \downarrow K, \theta >=< \psi \downarrow K, \theta > \neq 0 \tag{4.1.6}$$

(iii) The map $\psi \mapsto \psi^G$ is onto. Let $\chi \in \mathcal{B}$. Then $\chi \in Irr(G)$ and $< \chi \downarrow K, \theta > \neq 0$. If

$\chi \downarrow H = \lambda_1\psi_1 + \lambda_2\psi_2 + \cdots + \lambda_r\psi_r$, $\psi_i \in Irr(H)$ for $i = 1, 2, \cdots, r$, then

$\chi \downarrow K = \lambda_1(\psi_1 \downarrow K)+\cdots+\lambda_r(\psi_r \downarrow K)$. So $\exists\, i$, $1 \leq i \leq r$ such that $< \psi_i \downarrow K, \theta >\neq 0$, since $< \chi \downarrow K, \theta >\neq 0$.

Let $\psi = \psi_i$, then $\psi \in Irr(H)$ and $< \psi \downarrow K, \theta >\neq 0$. Hence $\psi \in \mathcal{A}$ and $< \psi, \chi \downarrow H >_H \neq 0$ and so $< \psi^G, \chi >=^{F-R}< \psi, \chi \downarrow H >_H \neq 0$. This shows that $\chi$ is an irreducible constituent of $\psi^G$. The fact that $\chi = \psi^G$ can be proved by repeating the above steps. To show that the map $\psi \mapsto \psi^G$ is one-to-one, we need to show that for $\psi \in \mathcal{A}$, $\psi$ is the unique irreducible constituent of $\psi^G \downarrow H$ which lies in $\mathcal{A}$.

Let $\chi = \psi^G$. Suppose $\psi_1 \in \mathcal{A}$ such that $\psi_1$ is a constituent of $\chi \downarrow H$ and $\psi_1 \neq \psi$. That is, $\chi \downarrow H = \lambda_1\psi + \lambda_2\psi_1 + \cdots$ and so $\chi \downarrow K = \lambda_1(\psi \downarrow K) + \lambda_2(\psi_1 \downarrow K) + \cdots$ Hence

$$\begin{aligned} < \chi \downarrow K, \theta > &= \lambda_1 < \psi \downarrow K, \theta > +\lambda_2 < \psi_1 \downarrow K, \theta > + \cdots \\ &\geq < \psi \downarrow K, \theta > + < \psi_1 \downarrow K, \theta > \\ &> < \psi \downarrow K, \theta > \end{aligned}$$

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contradicting $< \chi \downarrow K, \theta >=< \psi \downarrow K, \theta >$ by (4.1.6).

This completes the proof. $\square$

Theorem 4.1.5 implies that, to obtain the irreducible characters of $G$ that contain $\theta$ in their restriction to $K$, *it is sufficient to find the irreducible characters of $H$ that contain $\theta$ in their restriction to $K$* . If $\theta$ can be extended to an irreducible character of $H = I_G(\theta)$ ( that is, $\exists\, \psi \in Irr(H)$ and $\theta = \psi \downarrow K$), then the relevant characters of $H$ can be obtained by using the following theorem.

**Theorem 4.1.6.** [16] *Let $K \trianglelefteq G$ , $\theta \in Irr(K)$ and $H = I_G(\theta)$. If $\theta$ extends to an irreducible character $\varphi$ of $H$, then*

$\mathcal{A} = \{\psi | \psi \in Irr(H)\,, < \psi \downarrow K, \theta >\neq 0\} = \{\beta\varphi \,|\, \beta \in Irr(H), K \subseteq ker\beta\} =$

$\{\beta\varphi \,|\, \beta \in Irr(H/K)\}$

**Proof:** If $\{x_1, \cdots, x_f\}$ is a right transversal for $K$ in $H$, it follows that for every

$k \in K$,

$$\theta^H(k) = \sum_{i=1}^{f} \theta^\circ(x_i\, k\, {x_i}^{-1}) = \sum_{i=1}^{f} \theta(x_i\, k\, {x_i}^{-1}) = \sum_{i=1}^{f} \theta^{x_i}(k) = \sum_{i=1}^{f} \theta(k) = f\,\theta(k)$$

since $x_i\, k\, {x_i}^{-1} \in K$ for each $i = 1, 2, \cdots, f$ and $H = I_G(\theta)$ implies that $\theta$ is the only $H$-conjugate ( that is, $\theta^{x_i} = \theta$ for each $i$, $1 \leq i \leq f$). Hence $\theta^H \downarrow K = f\theta$ for some integer $f$.

Now $f\,\theta(1) = (\theta^H \downarrow K)(1) = \theta^H(1) = [H : K]\,\theta(1)$ by Definition iv.2.2 [33] , and so $f = [H : K]$.

Therefore $\theta^H \downarrow K = [H : K]\,\theta$ . Hence

$$< \theta^H, \theta^H >_H = ^{F-R} < \theta, \theta^H \downarrow K >_K = < \theta, [H : K]\,\theta >_K = \ [H : K] < \theta, \theta >_K = \ [H, K],$$

since $\theta \in Irr(K)$.

**Claim :**

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$$\theta^H = \sum_{\beta} \beta(1)\,\beta\,\varphi$$

where $\beta$ runs over all irreducible characters of $H$ that contain $K$ in their kernel, or equivalently over all irreducible characters of $H/K$.

For $g \notin K$, $xgx^{-1} \notin K$ for all $x \in G$, so $\theta^H(g) = 0$ and

$$\sum_{\beta} \beta(1)\,(\beta\,\varphi)(g) = \left(\sum_{\beta} (\beta(1)\,\beta(g))\right) \varphi(g) = 0$$

(column orthogonality for the character table of $H/K$, since $g \notin K$).

By Note 7 [33] and the fact that $\beta(g) = \beta(1)$ since $K \subseteq ker\beta$, then for $g \in K$

$$\sum_{\beta} \beta(1)\,(\beta\,\varphi)(g) \qquad = \sum_{\beta} \beta(1)\,\beta(g)\,\varphi(g) = \left(\sum_{\beta} (\beta(1))^2\right) \varphi(g) = |H/K|\,\varphi(g),$$

$$= [H:K]\,\varphi(g) = [H:K]\,\theta(g)$$

since for $g \in K$, $\theta(g) = (\varphi \downarrow K)(g) = \varphi(g)$. Therefore,

$$\theta^H \downarrow K = [H:K]\theta = \left(\sum_{\beta} \beta(1)\,\beta\,\varphi\right) \downarrow K.$$

This proves that

$$\theta^H = \sum_{\beta} \beta(1)\,\beta\,\varphi$$

as claimed.

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Now

$$\begin{aligned}
[H:K] &= <\theta^H, \theta^H> \\
&= \left\langle \sum_{\beta} \beta(1)\,\beta\,\varphi, \sum_{\gamma} \gamma(1)\,\gamma\,\varphi \right\rangle \\
&= \sum_{\beta,\gamma} \beta(1)\,\gamma(1) <\beta\,\varphi, \gamma\,\varphi> \\
&= \sum_{\beta} (\beta(1))^2 <\beta\,\varphi, \beta\,\varphi> + \sum_{\beta\neq\gamma} \beta(1)\,\gamma(1) <\beta\,\varphi, \gamma\,\varphi> \\
&\geq \sum_{\beta} (\beta(1))^2 + \sum_{\gamma\neq\beta} \gamma(1)\,\beta(1) <\beta\,\varphi, \gamma\,\varphi> \\
&\geq [H:K] + \sum_{\gamma\neq\beta} \gamma(1)\,\beta(1) <\beta\,\varphi, \gamma\,\varphi>
\end{aligned}$$

Therefore

$$\sum_{\gamma\neq\beta} \gamma(1)\,\beta(1) <\beta\,\varphi, \gamma\,\varphi> = 0$$

and hence $< \beta\,\varphi, \gamma\,\varphi >= 0\ \forall \gamma, \beta\ ,\ \gamma \neq \beta$, that is, the $\beta\,\varphi$ are distinct. But then

$$[H : K] = \sum_{\beta} (\beta(1))^2 < \beta\,\varphi, \beta\,\varphi >$$

and so $< \beta\,\varphi, \beta\,\varphi >= 1$. This shows that $\beta\,\varphi$ is irreducible, where $\beta$ runs over all irreducible characters of $H/K$. Since

$$\theta^H = \sum_{\beta} \beta(1)(\beta\,\varphi)$$

these $\beta\,\varphi$ are all the irreducible constituents of $\theta^H$ ($< \beta\varphi \downarrow K, \theta >=^{F-R}< \beta\varphi, \theta^H >_H \neq 0$), *so are all the irreducible characters of $H$ that contain $\theta$ in their restriction*, since for $\gamma \in Irr(H)$ with $0 \neq < \gamma \downarrow K, \theta >_K$ we have
$0 \neq < \gamma \downarrow K, \theta >_K =^{F-R}< \gamma, \theta^H >$ and so $\gamma$ is an irreducible constituent of $\theta^H$. Thus $\gamma = \beta\,\varphi$ for some $\beta \in Irr(H/K)$ and this completes the proof of the theorem. $\square$

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In Theorem 4.1.5 the set $\mathcal{B} = \{\chi \in Irr(G) \mid < \chi \downarrow K, \theta > \neq 0\} = \{\chi \in Irr(G) \mid \chi = \psi^G$ where $\psi \in Irr(H)$ and $< \chi \downarrow K, \theta > \neq 0\}$. If $\gamma \in Irr(H)$ with $< \gamma \downarrow K, \theta >_K \neq 0$ then $\gamma = \beta\,\varphi$ for some $\beta \in Irr(H/K)$, where $\varphi \in Irr(H)$ and $\varphi \downarrow K = \theta$, by Theorem 4.1.3. Hence

$$\begin{aligned} \mathcal{B} &= \{\chi \in Irr(G) \mid \chi = (\beta\,\varphi)^G \text{ for some } \beta \in Irr(H/K)\} \\ &= \{\chi \in Irr(G) \mid \chi = (\beta\,\varphi)^G, \beta \in Irr(H), K \subseteq ker\beta\} \end{aligned}$$

Now suppose that $G$ is an extension of $K$ by $Q$ and suppose further that every irreducible character of $K$ can be extended to its inertia group in $G$. Let $\theta_1, \cdots, \theta_t$ be representatives of the distinct orbits of $G$ on $Irr(K)$.

For each $i$, $1 \leq i \leq t$, let $\psi_i \in Irr(H_i)$ where $H_i = I_G(\theta_i)$ such that $\psi_i \downarrow K = \theta_i$.

If $\mathcal{B}_i = \{\chi \in Irr(G) \,|\, \chi = (\beta\,\psi_i)^G,\ \beta \in Irr(H_i), K \subseteq ker\beta\}$ then it is clear that

$$\bigcup_{i=1}^{t} \mathcal{B}_i \subseteq Irr(G)$$

Conversely, let $\chi \in Irr(G)$. If $< \gamma, \chi \downarrow K >_K \neq 0$ where $\gamma \in Irr(K)$, then $\gamma \in \theta_j^G$ for some $j$, $1 \leq j \leq t$. Then by Clifford's Theorem,

$$\chi \downarrow K = c \sum_{i=1}^{r} \delta_i \tag{4.1.7}$$

where $\delta_1, \delta_2, \cdots, \delta_r$ are the distinct conjugates of $\gamma$ in $G$ and $c =< \chi \downarrow K, \gamma >_K$. It is clear that $\gamma^G = \{\gamma^x \,|\, x \in G\} = \theta_j^G$. Hence it follows from 4.1.7 that $< \chi \downarrow K, \theta_j > \neq 0$ and so $\chi = \psi^G$ where $\psi \in Irr(H_j)$ such that $< \chi \downarrow K, \theta_j > \neq 0$. Therefore $\psi = \beta\,\psi_j$ for some $\beta \in Irr(H_j)$ where $\psi_j \downarrow K = \theta_j$ and so $\chi = (\beta\,\psi_j)^G$, $\beta \in Irr(H_j)$, $K \subseteq ker\beta$. Hence

$$Irr(G) = \dot{\bigcup_{i=1}^{t}} \{(\beta\,\psi_i)^G \,|\, \beta \in Irr(H_i) \text{ and } K \subseteq ker\beta\}. \quad \square$$

Hence the character table of $G$ is partitioned into $t$ blocks $\triangle_1, \triangle_2, \cdots, \triangle_t$ where $\triangle_i$ is produced from the subgroup $H_i$. We now give some results which give sufficient conditions for the irreducible characters of $K$ to be extendible to their respective inertia groups, so that the above method can be used to calculate the characters of $G$.

The first of these results is Mackey's theorem. The proof given here is obtained from Curtis and Reiner [12], page 353.

**Theorem 4.1.7.** *([12],[42]) Suppose that $K$ is a normal subgroup of $G$ such that $K$ is abelian and $G$ is a semi-direct product of $K$ by $Q$ for some $Q \leq G$. If $\theta \in Irr(K)$ is invariant in $G$, that is, $\theta^g = \theta\ \forall g \in G$, then $\theta$ can be extended to a linear character of $G$.*

**Proof:** Since $G$ is a semi-direct product, any $g \in G$ can be written uniquely as $g = kx$, $k \in K$, $x \in Q$. Define $\chi$ on $G$ by $\chi(kx) = \theta(k)$. Since $K$ is abelian, $\theta$ has degree 1 , so is linear, and the fact that $\theta = \theta^g$ for all $g \in G$ implies that $\theta(k) = \theta(gkg^{-1})$ for all $g \in G$.
Then if $g_1 = k_1x_1$, $g_2 = k_2x_2$, we have

$$\begin{aligned}\chi(g_1g_2) &= \chi(k_1x_1\, k_2x_2) = \chi(k_1k_2^{x_1}\, x_1x_2) = \theta(k_1k_2^{x_1}) = \theta(k_1)\,\theta(k_2^{x_1}) = \theta(k_1)\,\theta(x_1k_2\, {x_1}^{-1}) \\ &= \theta(k_1)\,\theta^{x_1}(k_2) = \theta(k_1)\,\theta(k_2) = \chi(g_1)\,\chi(g_2), \text{ since } \theta \text{ is linear.}\end{aligned}$$

Therefore $\chi$ is a linear character of $G$ and $\chi \downarrow K = \theta$ $\square$

Mackey's theorem is a corollary of a more general result by Karpilovsky [25] which we state without proof.

**Theorem 4.1.8.** [25] *Let the group $G$ contain a subgroup $Q$ of order $n$ such that $G = KQ$ for some $K$ normal in $G$ and let $\chi \in Irr(K)$ be invariant in $G$. Then $\chi$ extends to an irreducible character of $G$ if the following conditions hold:*

*(i) $gcd(m, n) = 1$ where $m = \chi(1)$;*

*(ii) $K \cap Q \leq K'$ where $K'$ is the derived subgroup of $K$.* $\square$

Another extension theorem is the following.

**Theorem 4.1.9.** [35] *Suppose $G$ is a split extension of $K$ by $Q$, then any linear character $\theta \in Irr(K)$ can be extended to its inertia group $I_G(\theta)$.*

*Proof:* Let $G = K : Q$ and $\theta \in Irr(K)$ which is linear. Let $H = I_G(\theta)$ and let $\bar{H} = I_Q(\theta)$. Then $H = K : \bar{H}$ and so $H/K \cong \bar{H}$ can be regarded as the inertia group of $\theta$ in the factor group $G/K \cong Q$. We have $K \cap \bar{H} = \{1\} \leq K'$ and since $\theta$ is linear, $deg(\theta) = 1$.
Furthermore $\theta$ is clearly $H$–invariant, and $< deg(\theta), |\bar{H}| > = < 1, |\bar{H}| > = 1$. Therefore $\theta$ can be extended to $H = I_G(\theta)$, by theorem 4.1.8. $\square$

**Remark 4.1.10.** We give a different proof of Mackey's theorem using theorem 4.1.8. Let $G = K : Q$, a split extension of $K$ by $Q$. Since $K$ is abelian, $K' = \{1\}$ and $deg(\theta) = 1$. Also $K \cap Q = \{1\}$ and so $K \cap Q \leq K'$. Since $\gcd(deg(\theta), |Q|) = 1$, it follows from theorem 4.1.8 that $\theta$ can be extended to $G$.

Let $\phi$ be a representation of $G$ and $\alpha$ an automorphism of $G$. Define $\phi^\alpha$ by $\phi^\alpha(x) = \phi(\alpha(x))\ \forall x \in G$. It follows that for $x, y \in G$, $\phi^\alpha(xy) = \phi(\alpha(xy)) = \phi(\alpha(x)\alpha(y)) = \phi(\alpha(x))\ \phi(\alpha(y)) = \phi^\alpha(x)\ \phi^\alpha(y)$ and hence $\phi^\alpha$ is a representation of $G$.

Let the representation $\phi$ afford the character $\chi_\phi$. Define $\chi_\phi^\alpha$ by $\chi_\phi^\alpha(x) = \chi_\phi(x^\alpha)$ $\forall x \in G$. Then $\chi_{\phi^\alpha}(x) = tr(\phi^\alpha(x)) = tr(\phi(x^\alpha)) = \chi_\phi(x^\alpha) = \chi_\phi^\alpha(x)$ and so $\chi_{\phi^\alpha} = \chi_\phi^\alpha$, that is, $\phi^\alpha$ affords the character $\chi_\phi^\alpha$.

The representation $\phi^\alpha$ and the character $\chi_\phi^\alpha$ are called the *algebraic conjugates* of $\phi$ and $\chi_\phi$, respectively, induced by the automorphism $\alpha$. Furthermore, if $\chi_\phi$ is irreducible then

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$$\begin{aligned} < \chi_\phi^\alpha, \chi_\phi^\alpha > &= \frac{1}{|G|} \sum_{g \in G} \chi_\phi^\alpha(g)\, \chi_\phi^\alpha(g^{-1}) \\ &= \frac{1}{|G|} \sum_{g \in G} \chi_\phi(g^\alpha)\, \chi_\phi((g^\alpha)^{-1}) \\ &= < \chi_\phi, \chi_\phi >= 1 \text{ because } \alpha(G) = G \end{aligned}$$

and thus $\chi_\phi$ irreducible implies $\chi_\phi^\alpha$ irreducible. Also if $a \in [x]$, where $x$ is a representative of a conjugacy class of $G$ then $a = gxg^{-1}$ for some $x \in G$ and so $a^\alpha = \alpha(a) = \alpha(gxg^{-1}) = \alpha(g)\,\alpha(x)\,\alpha(g^{-1}) = \alpha(g)\,\alpha(x)\,(\alpha(g))^{-1} = g^\alpha\, x^\alpha\, (g^\alpha)^{-1} \in [x^\alpha]$.Thus $([x])^\alpha \subseteq [x^\alpha]$.

Conversely, for any $a \in [x^\alpha]$, $a = g\, x^\alpha\, g^{-1} = (h\, x\, h^{-1})^\alpha \in ([x])^\alpha$. Thus $([x])^\alpha = [x^\alpha]$ and therefore $\alpha \in Aut(G)$ induces a permutation on the conjugacy classes of $G$. Let $X = (\chi_i(x_j))$ be the character table of $G$, where $\chi_i \in Irr(G)$, $1 \leq i \leq n$ and $x_j$, $1 \leq j \leq n$ are representatives of the conjugacy classes of elements of $G$. The automorphism $\alpha$ induces a permutation on the columns of $X$. Also for each

$\chi_i \in Irr(G)$, we know that $\chi_i^\alpha \in Irr(G)$.
Hence $\alpha$ induces a permutation on the irreducible characters $\chi_i$ of $G$ and thus induces a permutation on the rows of $X$. Moreover, since $\chi_i^\alpha(x_j) = \chi_i(x_j^\alpha)$, the matrices obtained from $X$ by these two operations are identical.

**Theorem 4.1.11.** *(**Brauer's Theorem**)* [17] *Let $G$ be a group and $K$ be a group of automorphisms of $G$. Then the number of orbits of $K$ as a group of permutations on the irreducible characters of $G$ is the same as the number of orbits of $K$ as a group of permutations on the conjugacy classes of $G$.*

**Proof:** Let $X$ be the character table of $G$. Then as a matrix, $X$ is square and nonsingular. Let $\alpha$ be an automorphism of $G$ such that $\alpha \in K$. Then $\alpha$ induces a permutation on the conjugacy classes of $G$ and thus a permutation on the columns of $X$.

Hence $K$ acts on the conjugacy classes of $G$. Since $\alpha \in K$, then to each character $\chi$ of $G$, we obtain a character $\chi^\alpha$ of $G$ such that $\chi^\alpha \in Irr(G)$ whenever $\chi \in Irr(G)$. For $y \in G$ we obtain that $\chi^\alpha(y) = \chi(y^\alpha)$, thus $\alpha$ induces a permutation on the rows of $X$. Hence $K$ acts on the irreducible characters of $G$.
Let $X^\alpha$ denote the image of $X$ under $\alpha$. Then we obtain that $P(\alpha)\,X = X^\alpha = X\,Q(\alpha)$ where $P(\alpha)$, $Q(\alpha)$ are appropriate permutation matrices which are uniquely determined by $\alpha \in K$. Suppose that $\alpha$, $\beta \in K$, then $X^{\alpha\,\beta} = (X^\alpha)^\beta$ and hence

$$P(\alpha\,\beta)\,X = X^{\alpha\,\beta} = (X^\alpha)^\beta = (P(\alpha)\,X)^\beta = P(\beta)\,P(\alpha)\,X \tag{4.1.8}$$

Also

$$X\,Q(\alpha\,\beta) = X^{\alpha\,\beta} = (X^\alpha)^\beta = (X\,Q(\alpha))^\beta = X\,Q(\alpha)\,Q(\beta) \tag{4.1.9}$$

Since $X$ is nonsingular, it follows from 4.1.8 and 4.1.9 that $P(\alpha\,\beta) = P(\beta)\,P(\alpha)$ and $Q(\alpha\,\beta) = Q(\alpha)\,Q(\beta)$. Define mappings $\pi_1$ and $\pi_2$ on $K$ by $\pi_1(\alpha) = (P(\alpha))^t$ and $\pi_2(\alpha) = Q(\alpha)$, where $t$ denotes the transpose operation on matrices.

Since

$$\pi_1(\alpha\,\beta) = (P(\alpha\,\beta))^t = (P(\beta)\,P(\alpha))^t = (P(\alpha))^t\,(P(\beta))^t = \pi_1(\alpha)\,\pi_1(\beta)$$

and

$$\pi_2(\alpha\,\beta) = Q(\alpha\,\beta) = Q(\alpha)\,Q(\beta) = \pi_2(\alpha)\,\pi_2(\beta),$$

it follows that $\pi_1$ and $\pi_2$ are permutation representations of $K$. Let $\theta_1$ and $\theta_2$ be the permutation characters afforded by $\pi_1$ and $\pi_2$, respectively.
Since $X^{-1}\,P(\alpha)\,X = Q(\alpha)$, $P(\alpha)$ and $Q(\alpha)$ are similar and thus have the same trace. Therefore $trace(P(\alpha))^t = trace(P(\alpha)) = trace(Q(\alpha))$ and so $\theta_1(\alpha) = \theta_{\pi_1}(\alpha) = tr(\pi_1(\alpha)) = tr((P(\alpha))^t) = tr(P(\alpha)) = tr(Q(\alpha)) = tr(\pi_2(\alpha)) = \theta_{\pi_2}(\alpha) = \theta_2(\alpha)$, $\forall \alpha \in K$.

Hence $\theta_1 = \theta_2$. Let $d_1, d_2$ be the number of orbits of $K$ on the irreducible characters and on the conjugacy classes of $G$, respectively. Thus we observe that $d_1$ is the number of orbits of $\pi_1(K)$ in its action as a group of permutations. Also $d_2$ is the number of orbits of $\pi_2(K)$ in its action as a group of permutations. Since $\theta_1$ and $\theta_2$ are the permutation characters of $K$ acting on the irreducible characters of $G$ and on the conjugacy classes of $G$, respectively, we have $d_1 =< \theta_1, 1_K >=< \theta_2, 1_K >= d_2$ by corollary 2.5.9. This completes the proof. $\square$

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# Chapter 5

# The Fischer–Clifford matrices

Character tables of finite groups can be constructed using various techniques. We are particularly interested in the method known as the technique of the Fischer–Clifford matrices. The technique derives its fundamentals from the Clifford theory and provides very powerful information for constructing character tables of group extensions. Given a group extension $G = K \cdot Q$ such that every irreducible character of $K$ can be extended to its inertia group then for each conjugacy class representative $g \in Q$, we are able to construct a matrix $M(g)$ called the Fischer–Clifford matrix. By using these matrices together with the fusion maps and character tables of some subgroups of $Q$ which are inertia factors of the inertia groups in $G$, the complete character table of $G$ can be constructed. These constructions of Fischer-Clifford matrices have been discussed and used by Salleh [40], List [28], List and Mahmoud [29], Fischer [15], Darafshesh [13], Pahlings [38], Moori and Mpono [34], Whitley [42], Ali [1] and Zimba [43].

We first discuss the theory of the Fischer–Clifford matrices and follow closely the work of Whitley [42].

Let $G = K \cdot Q$ such that every irreducible character of $K$ is extendible to its inertia group. We have that $G$ permutes $Irr(K)$ by $x : \theta \mapsto \theta^x$, where $x \in G$ and

$\theta \in Irr(K)$. Now let $\theta_1 = 1_K, \theta_2, \cdots, \theta_t$ be representatives of the orbits of $G$ on $Irr(K)$, $H_i = I_G(\theta_i)$, $1 \leq i \leq t$, $\psi_i \in Irr(H_i)$ be an extension of $\theta_i$ to $H_i$ and $\beta \in Irr(H_i)$ such that $K \subseteq ker(\beta)$. It was shown in chapter 4 that

$$Irr(G) = \bigcup_{i=1}^{t} \{(\beta\,\psi_i)^G \mid \beta \in Irr(H_i), K \subseteq ker(\beta)\}$$

Hence the irreducible characters of $G$ will be divided into blocks, where each block corresponds to an inertia group $H_i$.

## 5.1 Definitions and Preliminaries

**Remark 5.1.1.** If $G = K : Q$, with $K$ abelian, is a semi-direct product then by theorem 4.1.7 (Mackey's theorem) every irreducible character of $K$ can be extended to its inertia group in $G$. Hence the above result can be used to calculate the full character table of $G$.

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Let $G = K \cdot Q$ with the property that every irreducible character of $K$ can be extended to its inertia group. Let $\bar{g} \in G$ be a lifting of $g \in Q$ under the natural homomorphism $G \longrightarrow Q$ and $[g]$ be a conjugacy class of elements of $Q$ with representative $g$.

Let $X(g) = \{x_1, x_2, \cdots, x_{c(g)}\}$ be a set of representatives of the conjugacy classes of $G$ from the coset $K\bar{g}$ whose images under the natural homomorphism $G \longrightarrow Q$ are in $[g]$ and we take $x_1 = \bar{g}$. Let $\{\theta_1, \theta_2, \cdots, \theta_t\}$ be representatives of the orbits of $G$ on $Irr(K)$ such that for $1 \leq i \leq t$, we have $K \leq H_i = I_G(\theta_i)$ with $\bar{H}_i = H_i/K \leq Q$ and that $\psi_i \in Irr(H_i)$ is an extension of $\theta_i$ to $H_i$. Then without loss of generality suppose that $\theta_1 = I_K$ is the identity character of $K$. Then $H_1 = G$ and $\bar{H}_1 = Q$. Now choose $y_1, y_2, \cdots, y_r$ to be the representatives of the conjugacy classes of elements of $\bar{H}_i$ which fuse to $[g]$ in $Q$. Since $y_k \in \bar{H}_i$ for $1 \leq k \leq r$, then we define $y_{l_k} \in H_i$ such that $y_{l_k}$ ranges over all the representatives of the conjugacy classes of elements of $H_i$ which map to $y_k$ under the homomorphism $H_i \longrightarrow \bar{H}_i$ whose kernel is $K$. Let

$\beta \in Irr(H_i)$ such that $K \subseteq ker(\beta)$. Then $\beta$ is a lifting of $\hat{\beta} \in Irr(\bar{H}_i)$ such that $\beta(y_{l_k}) = \hat{\beta}(y_k)$ for any lifting $y_{l_k} \in H_i$ of $y_k \in \bar{H}_i$. Then we obtain that

$$\begin{aligned}(\psi_i\,\beta)^G(x_j) &= \sum_{1\leq k\leq r}\sum_{l}{}' \frac{|C_G(x_j)|}{|C_{H_i}(y_{l_k})|}\psi_i\,\beta(y_{l_k}) \\ &= \sum_{1\leq k\leq r}\sum_{l}{}' \frac{|C_G(x_j)|}{|C_{H_i}(y_{l_k})|}\psi_i(y_{l_k})\,\beta(y_{l_k}) \\ &= \sum_{1\leq k\leq r}(\sum_{l}{}' \frac{|C_G(x_j)|}{|C_{H_i}(y_{l_k})|}\psi_i(y_{l_k}))\,\hat{\beta}(y_k)\end{aligned}$$

where $\sum_l'$ is the summation over all $l$ for which $y_{l_k} \sim x_j$ in $G$. Now we define a matrix $M_i(g)$ by $M_i(g) = (a_{uv})$, where $1 \leq u \leq r$ and $1 \leq v \leq c(g)$, and

$$a_{uv} = \sum_{l}{}' \frac{|C_G(x_j)|}{|C_{H_i}(y_{l_k})|}\psi_i(y_{l_k})\,.$$

Then we obtain that

$$(\psi_i\,\beta)^G(x_j) = \sum_{1\leq k\leq r} a_{uv}\hat{\beta}(y_k)\,.$$

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By doing this for all $1 \leq i \leq t$ such that $\bar{H}_i$ contains an element in $[g]$ we obtain the matrix $M(g)$ given by

$$M(g) = \begin{bmatrix} M_1(g) \\ M_2(g) \\ \vdots \\ M_t(g) \end{bmatrix},$$

where $M_i(g)$ is the submatrix corresponding to the inertia group $H_i$ and its inertia factor $\bar{H}_i$. If $\bar{H}_i \cap [g] = \emptyset$, then $M_i(g)$ will not exist and $M(g)$ does not contain $M_i(g)$. The size of the matrix $M(g)$ is $p \times c(g)$ where $p$ is the number of conjugacy classes of elements of the inertia factors $\bar{H}_i$'s for $1 \leq i \leq t$ which fuse into $[g]$ in $Q$ and $c(g)$ is the number of conjugacy classes of elements of $G$ which correspond to

the coset $K\bar{g}$. Then $M(g)$ is the *Fischer–Clifford matrix* of $G$ corresponding to the coset $K\bar{g}$. We will see later that $M(g)$ is a $c(g) \times c(g)$ nonsingular matrix.
Let $R(g) = \{(i, y_k) \,|\, 1 \leq i \leq t, \bar{H}_i \cap [g] \neq \emptyset, 1 \leq k \leq r\}$ and we note that $y_k$ runs over representatives of the conjugacy classes of elements of $\bar{H}_i$ which fuse into $[g]$ in $Q$. Following the notation used in Whitley [42] we denote $M(g)$ by writing $M(g) = (a^j_{(i,y_k)})$, where

$$a^j_{(i,y_k)} = \sum_l{}' \frac{|C_G(x_j)|}{|C_{H_i}(y_{l_k})|} \psi_i(y_{l_k}) \,,$$

with columns indexed by $X(g)$ and rows indexed by $R(g)$. Then the partial character table of $G$ on the classes $\{x_1, x_2, \cdots, x_{c(g)}\}$ is given by

$$\begin{bmatrix} C_1(g)\, M_1(g) \\ C_2(g)\, M_2(g) \\ \vdots \\ C_t(g)\, M_t(g) \end{bmatrix}$$

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where the Fischer-Clifford matrix $M(g)$ is divided into blocks $M_i(g)$ with each block corresponding to an inertia group $H_i$ and $C_i(g)$ is the partial character table of $\bar{H}_i$ consisting of the columns corresponding to the classes that fuse into $[g]$ in $Q$. We can also observe that the number of irreducible characters of $G$ is the sum of the numbers of irreducible characters of the inertia factors $\bar{H}_i$'s.

## 5.2 Properties of Fischer-Clifford matrices

We shall discuss the properties which are useful in the computation of the Fischer–Clifford matrices. We only provide a selection of proofs of these properties. At the end of the section the properties of the Fischer–Clifford matrices will be summarized. Let $K$ be a group and $A \leq Aut(K)$. Then by Brauer's theorem $A$ acts on the

conjugacy classes of elements of $K$ and on the irreducible characters of $K$ resulting in the same number of orbits.

**Lemma 5.2.1.** Suppose we have the following matrix describing the above actions :

$$\begin{array}{c} \\ s_1 \\ s_2 \\ \vdots \\ s_i \\ \vdots \\ s_t \end{array} \begin{array}{c} \begin{array}{cccccc} 1 = l_1 & l_2 & \dots & l_j & \cdots & l_t \end{array} \\ \begin{pmatrix} 1 & 1 & \cdots & 1 & \cdots & 1 \\ a_{21} & a_{22} & \cdots & a_{2j} & \cdots & a_{2t} \\ \vdots & \vdots & & \vdots & & \vdots \\ a_{i1} & a_{i2} & \cdots & a_{ij} & \cdots & a_{it} \\ \vdots & \vdots & & \vdots & & \vdots \\ a_{t1} & a_{t2} & \cdots & a_{tj} & \cdots & a_{tt} \end{pmatrix} \end{array}$$

where $a_{1j} = 1$ for $j \in \{1, 2, \cdots, t\}$, $l_j$'s are lengths of orbits of $A$ on the conjugacy classes of $K$, $s_i$'s are the lengths of orbits of $A$ on $Irr(K)$ and $a_{ij}$ is the sum of $s_i$ irreducible characters of $K$ on the element $x_j$, where $x_j$ is an element of the orbit of length $l_j$. Then the following relation holds for $i, i' \in \{1, 2, \cdots, t\}$ : $\sum_{j=1}^{t} a_{ij}\, \overline{a_{i'j}}\, l_j = |K| s_i\, \delta_{ii'}$ .

Let $\underline{s_i}$ denote the sum of $s_i$ irreducible characters of $K$,
so $\underline{s_i}(x_j) = a_{ij}$. Then $< \underline{s}_i, \underline{s}_{i'} >= \frac{1}{|K|} \sum_{j=1}^{t} l_j \underline{s_i}(x_j)\overline{\underline{s_{i'}}(x_j)} = |K|^{-1} \sum_{j=1}^{t} l_j a_{ij} \overline{a_{i'j}}$

By the orthogonality of irreducible characters,

$< \underline{s}_i, \underline{s}_{i'} >= s_i \delta_{ii'}$, and hence $\sum_{j=1}^{t} l_j a_{ij} \overline{a_{i'j}} = |s_i| \delta_{ii'}$

Let $x_j \in X(g)$ and define $m_j = [C_{\bar{g}} : C_G(x_j)]$. The Fischer-Clifford matrix $M(g)$ is partitioned row–wise into blocks, where each block corresponds to an inertia group. The columns of $M(g)$ are indexed by $X(g)$ and for each $x_j \in X(g)$, at the top of the columns of $M(g)$, we write $|C_G(x_j)|$ and at the bottom we write $m_j$. The rows of $M(g)$ are indexed by $R(g)$ and on the left of each row we write $|C_{\bar{H}_i}(y_k)|$, where $y_k$ fuses into $[g]$ in $Q$. Then in general we can write $M(g)$ with corresponding weights for rows and columns as follows, where blocks corresponding to the inertia groups are separated by horizontal lines.

$$
\begin{array}{c|cccc}
 & |C_G(x_1)| & |C_G(x_2)| & \cdots & |C_G(x_{c(g)})| \\
|C_G(g)| & a^1_{(1,g)} & a^2_{(1,g)} & \cdots & a^{c(g)}_{(1,g)} \\
\hline
|C_{\bar{H}_2}(y_1)| & a^1_{(2,y_1)} & a^2_{(2,y_1)} & \cdots & a^{c(g)}_{(2,y_1)} \\
|C_{\bar{H}_2}(y_2)| & a^1_{(2,y_2)} & a^2_{(2,y_2)} & \cdots & a^{c(g)}_{(2,y_2)} \\
\vdots & \vdots & \vdots & \vdots & \vdots \\
\hline
|C_{\bar{H}_i}(y_1)| & a^1_{(i,y_1)} & a^2_{(i,y_1)} & \cdots & a^{c(g)}_{(i,y_1)} \\
|C_{\bar{H}_i}(y_2)| & a^1_{(i,y_2)} & a^2_{(i,y_2)} & \cdots & a^{c(g)}_{(i,y_2)} \\
\vdots & \vdots & \vdots & \vdots & \vdots \\
\hline
|C_{\bar{H}_t}(y_1)| & a^1_{(t,y_1)} & a^2_{(t,y_1)} & \cdots & a^{c(g)}_{(t,y_1)} \\
|C_{\bar{H}_t}(y_2)| & a^1_{(t,y_2)} & a^2_{(t,y_2)} & \cdots & a^{c(g)}_{(t,y_2)} \\
\vdots & \vdots & \vdots & \vdots & \vdots \\
\hline
 & m_1 & m_2 & \cdots & m_{c(g)}
\end{array}
$$

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From the theory of coset analysis for computing the conjugacy classes of elements of $G = K \cdot Q$ where $K$ is abelian, we observe that

$$m_j = [C_g : C_G(x_j)] = \frac{f \cdot |K|}{l}.$$

The following result gives the orthogonality relation for $M(g)$.

**Proposition 5.2.2.** *(**Column orthogonality**) Let $G = K \cdot Q$, then*

$$\sum_{(i,y_k)\in R(g)} |C_{\bar{H}_i(y_k)}|\, a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y_k)}} = \delta_{jj'}\, |C_G(x_j)|\,.$$

**Proof:** The partial character table of $G$ at classes $x_1, \cdots, x_{c(g)}$ is given by

$$\begin{bmatrix} C_1(g)\, M_1(g) \\ C_2(g)\, M_2(g) \\ \vdots \\ C_t(g)\, M_t(g) \end{bmatrix}$$

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By column orthogonality of the character table of $G$, we have

$$\begin{aligned}
|C_G(x_j)|\,\delta_{jj'} &= \sum_{i=1}^{t} \sum_{\beta_i\in Irr(\bar{H}_i)} \Big( \sum_{y_k:(i,y_k)\in R(g)} a^j_{(i,y_k)}\, \beta_i(y_k) \Big) \overline{\Big( \sum_{y'_k:(i,y'_k)\in R(g)} a^{j'}_{(i,y'_k)}\, \beta_i(y'_k) \Big)} \\
&= \sum_{i=1}^{t} \sum_{\beta_i\in Irr(\bar{H}_i)} \Big( \sum_{y_k} a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y_k)}}\, \beta_i(y_k)\, \overline{\beta_i(y_k)} + \\
&\quad \sum_{y_k} \sum_{y'_k\neq y_k} a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y'_k)}}\, \beta_i(y_k)\, \overline{\beta_i(y'_k)} \Big) \\
&= \sum_{i=1}^{t} \Big( \sum_{y_k} a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y_k)}} \sum_{\beta_i\in Irr(\bar{H}_i)} \beta_i(y_k)\, \overline{\beta_i(y_k)} + \\
&\quad \sum_{y_k} \sum_{y'_k\neq y_k} a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y'_k)}} \sum_{\beta_i\in Irr(\bar{H}_i)} \beta_i(y_k)\, \overline{\beta_i(y'_k)} \Big) \\
&= \sum_{i=1}^{t} \Big( \sum_{y_k} a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y_k)}}\, |C_{\bar{H}_i}(y_k)| + 0 \Big) \\
&= \sum_{(i,y_k)\in R(g)} a^j_{(i,y_k)}\, \overline{a^{j'}_{(i,y_k)}}\, |C_{\bar{H}_i}(y_k)|\,. \quad \square
\end{aligned}$$

**Theorem 5.2.3.** $a^j_{(1,g)} = 1$ *for all* $j = \{1, \cdots, c(g)\}$

**Proof:** For $y_{l_k} \sim x_j$ in $G$, we have $|C_G(x_j)| = |C_{H_i}(y_{l_k})|$ . Thus we obtain that

$$a^j_{(1,g)} = \sum_l{}' \frac{|C_G(x_j)|}{|C_{H_1}(y_{l_k})|} \psi_1(y_{l_k}) = \sum_l{}' 1 = 1.$$

Hence the result. □

The properties of the Fischer–Clifford matrix $M(g)$ can be summarized as follows :

(a) $|X(g)| = |R(g)|$

(b) $\sum_{j=1}^{c(g)} m_j \, a^j_{(i,y_k)} \, \overline{a^j_{(i',y'_k)}} = \delta_{(i,y_k),(i',y'_k)} \frac{|C_Q(g)|}{|C_{\bar{H}_i}(y_k)|} |K|$

(c) $\sum_{(i,y_k)\in R(g)} a^j_{(i,y_k)} \, \overline{a^{j'}_{(i,y_k)}} \, |C_{\bar{H}_i}(y_k)| = \delta_{jj'} \, |C_G(x_j)|$

(d) $M(g)$ is a square and nonsingular.

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If $K$ is elementary abelian, then we obtain the following additional properties of $M(g)$.

(e) $a^1_{(i,y_k)} = \frac{|C_Q(g)|}{|C_{\bar{H}_i}(y_k)|}$

(f) $|a^1_{(i,y_k)}| \geq |a^j_{(i,y_k)}|$

**Remark 5.2.4.** Let $G = K : Q$ be a split extension, where $K$ is an elementary abelian 2-group. It was shown in section 5.2.2 [35] that the Fischer-Clifford matrix $M(g)$ satisfies the following properties:

1. $a^j_{(i,y_k)} \equiv a^1_{(i,y_k)} (mod\ 2)$ for all $j \geq 2$
2. $a^1_{(1,y_k)} \in \mathbb{N}$
3. For any $j$-th column of $M(g)$ for which $j \geq 2$, we obtain $\sum_i a^j_{(i,y_k)} = 0$

Since $a^j_{(i,y_k)} \in \mathbb{Z}$, we deduce that the Fischer-Clifford matrix $M(g)$ in Remark 5.2.5 will have integer entries $a^j_{(i,y_k)}$ such that $a^1_{(i,y_k)} \geq |a^j_{(i,y_k)}|$ and $a^j_{(i,y_k)} \equiv a^1_{(i,y_k)} (mod 2)$. If $a^1_{(i,y_k)} = n$ for some $n \in \mathbb{N}$, then for $j \geq 2$ we have $a^j_{(i,y_k)} \in \{\pm 1, \pm 3, ..., \pm n\}$ if $n$ is odd and $a^j_{(i,y_k)} \in \{0, \pm 2, \pm 4, ..., \pm n\}$ if $n$ is even. It is easy to see that for a fixed $n$ there are $n + 1$ possible values for each $a^j_{(i,y_k)}$ with $j \geq 2$.

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# Chapter 6

# Symplectic Groups

In the remaining chapters we will be studying some groups which are maximal subgroups of symplectic groups. In particular in chapter 7 we will construct the Fischer-Clifford matrices and the character tables of the inertia groups of the group $2^7 : Sp_6(2)$, an affine subgroup of the symplectic group $Sp_8(2)$ of index 255. In chapter 8 we will study the inertia group $2^7 : (2^5 : S_6)$ of $2^7 : Sp_6(2)$, a maximal subgroup of $\overline{F}i_{22}$ of index 694980. It is for this reasons that we briefly discuss the properties of symplectic groups as well as their affine subgroups. We will closely follow the work of Ali[1]. For further readings and information on symplectic groups and their affine subgroups, readers are referred to [18], [19] and [20]

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## 6.1 Symplectic Groups

**Definition 6.1.1.** Let $V$ be a vector space over a field $\mathbb{F}$ and let $f : V \times V \to \mathbb{F}$ be a function such that for all $u, v, w \in V$ and all $\alpha, \beta \in \mathbb{F}$ we have

1. $f(\alpha u + \beta v, w) = \alpha f(u, w) + \beta f(v, w)$
2. $f(w, \alpha u + \beta v) = \alpha f(w, u) + \beta f(w, v)$

Then $f$ is called a bilinear form on $V$. If $f$ is a bilinear form on $V$ such that for all $u \in V$ we have $f(u, u) = 0$, then $f$ is called an alternating (symplectic) form on $V$.

If $f$ is a symplectic form on $V$ such that for $u \in V$, $u \neq 0$, there exists $v \in V$ for which $f(u, u) \neq 0$, then f is said to be non-degenerate.

**Definition 6.1.2.** Let $V$ be a vector space over a field $\mathbb{F}$. Let $f : V \times V \to \mathbb{F}$ be a bilinear form satisfying the relations

1. $f(u, u) = 0 \ \ \forall u \in V$
2. $f(u, v) = -f(v, u) \ \ \forall u, v \in V$

Then the pair $(V, f)$ is called a symplectic space over the field $\mathbb{F}$.

**Remark 6.1.3.** If $char(F) \neq 2$, then the properties (i) and (ii) in the above definition are equivalent. Moreover the symplectic space $(V, f)$ becomes non-degenerate if $f$ is non-degenerate.

Let $(V, f)$ and $(W, f)$ be symplectic spaces over the same field $\mathbb{F}$, then we say that $V \cong W$ if and only if there exists $T \in L(V, W)$ such that $T$ is an isomorphism and $\forall u, v \in V$

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$$f(u, v) = g(T(u), T(v)).$$

If $T \in L(V, V)$ is an isomorphism such that $\forall u, v \in V$

$$f(u, v) = f(T(u), T(v)).$$

then $T$ is called an *isometry* on $(V, f)$.

**Definition 6.1.4.** Let $(V, f)$ be a symplectic space and assume that $U$ is a subspace of $V$. Define

$$U^{\perp} = \{v \in V | f(u, v) = 0 \ \ \forall u \in U\}.$$

Then $U^{\perp}$ is called the perpendicular space of $U$.

Note that for all $u \in U$ we have

$$f(0,u) = f(u-u,u) = f(u,u) - f(u,u) = 0 - 0 = 0 \ ,$$

so that $0 \in U^{\perp}$. It is not difficult to show that $U^{\perp}$ is a subspace of $V$.
Let $(V,f)$ be a symplectic space and define $R(V)$ by $R(V) = V^{\perp}$. Then we call $R(V)$ the *radical* of $V$.

**Theorem 6.1.5.** *Let $(V,f)$ be a symplectic space. Then $R(V) = 0$ iff $f$ is non-degenerate.*

**Proof**: See (Theorem 4.2.4, [35]).

**Remark 6.1.6.** It can be shown that if $(V,f)$ is a finite dimensional non-degenerate symplectic space, then $dimV = 2n$, for some $n \in \mathbb{N}$.

**Definition 6.1.7.** *Let $(V,f)$ be a non-degenerate symplectic space of dimension $2n$ over a field $\mathbb{F}$. Then the set of all isometries of $V$ forms a group which is called a symplectic group and is denoted by $Sp_{2n}(\mathbb{F})$.*

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If $\mathbb{F} = GF(q)$ is a Galois field of $q$ elements, where $q = p^k$ for some $k$ with $p$ a prime, then $Sp_{2n}(\mathbb{F})$ will be denoted by $Sp_{2n}(q)$. We further obtain that $Sp_{2n}(\mathbb{F}) \leq GL_{2n}(\mathbb{F})$. Also within isomorphism, $Sp_{2n}(\mathbb{F})$ is independent of the choice of $f$.

**Remark 6.1.8.** If $dim(V) = 2$ then $Sp_2(\mathbb{F}) = SL_2(\mathbb{F})$.

## 6.2 The Affine Subgroups of Symplectic Groups

Let $V$ be a vector space of dimension $2n$ over $GF(q)$, where $q$ is a power of a prime $p$. Then $Sp_{2n}(q)$ is transitive on the nonzero points of $V$. Then we consider the subgroup of $Sp_{2n}(q)$ which is a stabilizer of a nonzero vector of $V$ and study the structure of this subgroup.

**Definition 6.2.1.** *Let $\{e_1, e_2, ..., e_{2n}\}$ be a basis for $V$ and $f$ be a non-degenerate symplectic form $f : V \times V \to F$ defined by $f(e_i, e_j) = \delta(i, 2n + 1 - j)$, where $i \leq j$. Then $(V, f)$ is a non-degenerate symplectic space of dimension $2n$. Let $T$ be an isometry of $(V, f)$ and*

$$G(n) = Sp_{2n}(q) = \{T | f(T(x), T(y)) = f(x, y) \ \ \forall x, y \in V\} \ .$$

*Then $G(n)$ acts transitively on $V^*$. Let $\alpha \in V^*$ and $A(n)$ be the stabilizer of $\alpha$ in $G(n)$. Then we obtain that*

$$A(n) = \{T \in G(n) | T(\alpha) = \alpha\} \ .$$

*Then $A(n) \leq G(n)$ and $A(n)$ is called the affine subgroup of $G(n)$.*

Since $A(n) \leq G(n)$, then we obtain that $[G(n) : A(n)] = q^{2n} - 1$ and $A(n)$ is the subgroup of $G(n)$ that fixes a nonzero vector $\alpha \in V^*$.
Let $G$ be a group. Then the intersection of all maximal subgroups of $G$ is itself a subgroup of $G$. We denote this intersection by $\Phi(G)$ and write

$$\Phi(G) = \bigcap_{max_{M \leq G}} M \ .$$

Then $\Phi(G)$ is called the *Frattini subgroup* of $G$. If $G$ is finite and $G \neq 1$, then clearly $\Phi(G)$ is a subgroup of $G$ and if $G$ has no maximal subgroups then $\Phi(G) = G$. Also it can be shown that $\Phi(G)$ is normal in $G$. Now suppose that $G = P$ is a *p-group*. Then $P' \leq \Phi(G)$ and $P/\Phi(G)$ is an elementary abelian *p-group*. Also $\Phi(G) = 1$ iff $G$ is elementary abelian.

**Definition 6.2.2.** We define $P(n)$ to be the subgroup of $A(n)$ consisting of elements

$T \in G(n)$, such that

$$T(e_1) = e_1$$
$$T(e_i) = \alpha_i e_1 + e_i,\ 2 \leq i \leq 2n-1$$

and

$$T(e_{2n}) = \sum_{i=1}^{2n} \beta_i e_i$$

with $\beta_{2n} = 1$ and

$$\alpha_j = \begin{cases} -\beta_{2n+1-j} & 2 \leq j \leq n \\ \beta_{2n+1-j} & n < j \leq 2n-1 \end{cases}$$

If $x \in P(n)$, then $x$ is represented by the following matrix, with respect to the basis given in Definition 6.2.1:

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$$\begin{pmatrix} 1 & -\beta_{2n-1} & -\beta_{2n-2} & \cdots & \beta_2 & \beta_1 \\ 0 & 1 & 0 & \cdots & 0 & \beta_2 \\ \vdots & \vdots & \vdots & \cdots & \vdots & \vdots \\ 0 & 0 & 0 & \cdots & 1 & \beta_{2n-1} \\ 0 & 0 & 0 & \cdots & & 1 \end{pmatrix}$$

It is convenient to describe $P(n)$ as an abstract group $P$ in the following manner: Let $(W, f)$ be a non-degenerate symplectic space of dimension $2n-2$ over $GF(2)$ and consider the pairs $[w, a]$, where $w \in W$ and $a \in GF(q)$. Define a multiplication on such pairs by $[w, a][u, b] = [u+w, a+b+f(w, u)]$. Clearly $|P| = q^{2n-2} \times q = q^{2n-1}$ .

**Lemma 6.2.3.** *If $char(\mathbb{F}) = p$ where $p$ is an odd prime, then the group $P$ is a non-abelian special $p$-group of order $q^{2n-2}$ isomorphic to $P(n)$.*

**Proof**: See [18].

**Remark 6.2.4.** It is not difficult to see that if $p = 2$, then $P(n)$ is an elementary

abelian $2-$ *group*.

**Lemma 6.2.5.** *Let $H$ be the subgroup of $A(n)$ which fixes $e_{2n}$. Then $H$ fixes both $e_1$ and $e_{2n}$ and acts on $X =< e_2, e_3, ..., e_{2n-1} >$ as $G(n-1)$. Moreover $H \cong G(n-1) \cong Sp_{2n-2}(q)$.*

**Proof**: See [39].

**Theorem 6.2.6.** [*Gow*] *Let $q$ be a power of an odd prime $p$. Then $A(n)$ is the split extension of a special $p-$ group of order $q^{2n-1}$ by a subgroup $H$ of $G(n)$ such that $H \cong G(n-1) \cong Sp_{2n-2}(q)$. That is*

$$A(n) = P(n) : H = P(n) : Sp_{2n-2}(q) \ .$$

**Proof**: See [39].

**Remark 6.2.7.** Let $q = 2^k$ for some $k \in \mathbb{N}$. Then $P(n)$ is an elementary abelian 2-group. The group $A(n)$ has $2q$ orbits $\triangle_1, \triangle_2, ..., \triangle_{2q}$ such

$$\begin{aligned} |\triangle_1| = |\triangle_2| &= ... = |\triangle_q| = 1 \ , \\ |\triangle_{q+1}| = |\triangle_{q+2}| &= ... = |\triangle_{2q}| = q^{2n-2} - 1 \ . \end{aligned}$$

Furthermore the action of $A(n)$ on $Irr(P(n))$ produces $2q$ orbits $\Gamma_1, \Gamma_2, ..., \Gamma_{2q}$ with

$$\begin{aligned} |\Gamma_1| &= 1 \ , \ |\Gamma_2| = q^{2n-2} - 1 \ , \\ |\Gamma_3| = |\Gamma_4| &= ... = |\Gamma_{q+1}| = \frac{1}{2} q^{n-1}(q^{n-1} + 1) \ , \\ |\Gamma_{q+2}| = |\Gamma_{q+3}| &= ... = |\Gamma_{2q}| = \frac{1}{2} q^{n-1}(q^{n-1} - 1) \end{aligned}$$

The corresponding inertia factor groups are

$G(n-1)$; $A(n-1)$; $O^+(2n-2, q)$, $q-1$ copies; $O^-(2n-2, q)$, $q-1$ copies.

# Chapter 7

# The inertia groups of $2^7 : Sp_6(2)$ , the affine subgroup of $Sp_8(2)$

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Let $G = K : Q$. Then for all $\theta \in Irr(K)$, define

$$H = \{g \in G | \theta^g = \theta\} = I_G(\theta)$$
$$\bar{H} = \{q \in Q | \theta^q = \theta\} = I_Q(\theta)$$

Then it can be shown that $H = K : \bar{H}$, where $H$ is the inertia group of $\theta$ in $G$. The inertia factor of $H/K \cong \bar{H}$ can be regarded as the inertia group of $\theta$ in the factor group $G/K \cong Q$.

In this chapter we are concerned with the inertia groups in $A(4)$, the affine subgroup of $Sp_8(2)$. $A(4)$ is the subgroup of $Sp_8(2)$ fixing the non-zero vector $e_1$ in $V_8(2)$, where $V_8(2)$ is the vector space of dimension 8 over $GF(2)$. We obtain from theorem 6.2.6 and lemma 6.2.5 that

$$A(4) = P(4) : H = 2^7 : Sp_6(2).$$

Ali [1] constructed both of $2^7$ and $Sp_6(2)$ in terms of $8 \times 8$ matrices inside $Sp_8(2)$ and

then act $Sp_6(2)$ on $2^7$ by conjugation to represent $Sp_6(2)$ in terms of $7 \times 7$ matrices over $GF(2)$.

$2^7 : Sp_6(2)$ acts on $Irr(2^7)$ to produce four inertia groups $H_i = 2^7 : \bar{H}_i$ of indices 1, 36, 28 and 63 in $2^7 : Sp_6(2)$, respectively and where $i \in \{1, 2, 3, 4\}$. The groups are $2^7 : Sp_6(2)$, $2^7 : S_8$, $2^7 : O_6^-(2)$ and $2^7 : (2^5 : S_6)$, where the inertia factor groups $\bar{H}_i$, that is, $S_8$, $O_6^-(2)$ and $2^5 : S_6$ are maximal subgroups of $Sp_6(2)$. Note that $O_6^-(2) \cong U_4(2) : 4$. The reader is referred to Ali [1] regarding the above mentioned inertia groups.

Ali[1] has already calculated the charactertable of $2^7 : Sp_6(2)$ by the method of Fischer-Clifford matrices. In this chapter we study the inertia groups of $2^7 : Sp_6(2)$ , determine their Fischer-Clifford matrices, construct their character tables and finally determine their fusion maps into $2^7 : Sp_6(2)$ . Note all these groups under consideration are split extensions. Motivation for these problems came from the Ph.D thesis of Ali[1].

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## 7.1 The group $2^7 : S_8$

Let $G = H_2 = 2^7 : S_8$ be the split extension of $K = 2^7$ by $Q = S_8$ , where $K$ is the vector space of dimension 7 over $GF(2)$ on which $Q$ acts .

### 7.1.1 The conjugacy classes of $2^7 : S_8$

In this section we use the method of coset analysis discussed in Chapter 3, to determine the conjugacy classes of elements of $2^7 : S_8$. We generated $S_8$ by three elements $q1 \in 2A$ , $q2 \in 2D$ and $q3 \in 4B$ of $Sp_6(2)$. Ali [1] constructed $Sp_6(2)$ in terms of $7 \times 7$ matrices over $GF(2)$. Here $2A$, $2D$ and $4B$ are conjugacy classes of elements of $Sp_6(2)$ and $q1$, $q2$and $q3$ are given by :

$$q1=\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}, \quad q2=\begin{pmatrix} 0&1&1&0&0&1&0\\ 0&0&1&1&0&0&0\\ 0&1&0&0&1&1&1\\ 0&0&0&0&1&1&1\\ 0&0&0&1&0&1&1\\ 1&1&1&1&1&1&1\\ 1&1&1&1&1&0&0 \end{pmatrix} \quad \text{and } q3=\begin{pmatrix} 1&1&1&1&1&1&1\\ 0&0&1&1&1&1&1\\ 0&1&1&1&0&0&1\\ 0&1&1&0&1&1&0\\ 0&0&0&0&1&0&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$$

The elements $q_1$, $q_2$ are of order 2 and $q_3$ is of order 4. We obtained the conjugacy classes of $S_8$ using MAGMA [7] and are represented in the table below. The class representatives of each class $[q]_{S_8}$ of $S_8$ are given in terms of $7 \times 7$ matrices over $GF(2)$.

Table 7.1: The Conjugacy classes of $S_8$

| $[q]_{S_8}$ | *Class representative* | $\lvert[q]_{S_8}\rvert$ | $[q]_{S_8}$ | *Class representative* | $\lvert[q]_{S_8}\rvert$ |
|---|---|---|---|---|---|
| $1A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1 | $2A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&1&0&0\\ 1&1&1&1&1&0&0\\ 1&1&0&0&1&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&1&1&0\\ 1&1&0&1&1&0&1 \end{pmatrix}$ | 28 |
| $2B$ | $\begin{pmatrix} 1&0&1&0&0&0&1\\ 1&0&0&1&1&0&1\\ 0&0&0&0&0&0&1\\ 0&0&0&1&0&0&0\\ 1&1&0&1&0&0&1\\ 0&0&1&0&0&1&1\\ 0&0&1&0&0&0&0 \end{pmatrix}$ | 105 | $2C$ | $\begin{pmatrix} 0&1&1&1&0&1&1\\ 0&1&0&0&0&0&0\\ 1&1&0&1&1&0&1\\ 0&0&0&1&1&1&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&1&1&1 \end{pmatrix}$ | 210 |
| $2D$ | $\begin{pmatrix} 0&1&1&1&0&1&1\\ 0&0&0&1&1&1&1\\ 0&0&0&0&1&1&0\\ 1&0&0&1&0&1&0\\ 1&1&0&1&0&0&1\\ 1&1&1&1&0&0&1\\ 1&1&1&1&0&1&0 \end{pmatrix}$ | 420 | $3A$ | $\begin{pmatrix} 0&1&0&0&0&1&0\\ 1&1&0&1&1&0&0\\ 1&0&1&1&1&0&0\\ 1&0&0&0&1&0&0\\ 1&0&0&1&0&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 112 |
| $3B$ | $\begin{pmatrix} 0&1&1&0&1&0&1\\ 0&1&0&1&0&0&1\\ 0&0&0&0&0&0&1\\ 0&1&1&0&0&0&1\\ 0&0&0&1&1&0&1\\ 1&1&1&0&1&1&1\\ 1&1&1&0&1&0&0 \end{pmatrix}$ | 1120 | $4A$ | $\begin{pmatrix} 1&1&0&1&1&1&0\\ 0&1&0&0&0&0&0\\ 1&0&0&0&0&1&1\\ 1&1&1&0&0&1&1\\ 1&1&1&1&1&1&1\\ 1&1&1&1&0&0&1\\ 1&1&1&1&0&1&0 \end{pmatrix}$ | 420 |
| $4B$ | $\begin{pmatrix} 1&0&1&1&0&0&1\\ 0&0&0&1&1&1&1\\ 1&1&0&0&1&0&0\\ 0&0&1&1&0&0&1\\ 1&0&1&0&1&1&1\\ 1&1&1&0&1&1&0\\ 1&1&1&0&1&0&1 \end{pmatrix}$ | 1260 | $4C$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&1&0&0&0&1&1\\ 1&1&1&0&1&0&0\\ 1&0&1&1&1&0&1\\ 1&0&1&0&0&0&1\\ 1&1&1&0&0&0&0\\ 1&1&1&0&0&1&1 \end{pmatrix}$ | 1260 |

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Table 7.1 : The Conjugacy classes of $S_8$ (continued)

| $[q]_{S_8}$ | *Class representative* | $\lvert[q]_{S_8}\rvert$ | $[q]_{S_8}$ | *Class representative* | $\lvert[q]_{S_8}\rvert$ |
|---|---|---|---|---|---|
| $4D$ | $\begin{pmatrix} 1&1&0&1&0&0&1\\ 1&0&0&1&1&0&0\\ 0&1&0&0&1&1&1\\ 0&0&1&1&0&0&1\\ 1&0&1&1&1&1&1\\ 0&1&1&1&0&1&0\\ 0&1&1&1&0&0&1 \end{pmatrix}$ | 2520 | $5A$ | $\begin{pmatrix} 1&1&1&0&0&0&1\\ 1&0&0&0&0&1&0\\ 1&1&0&0&1&0&0\\ 1&1&1&1&1&0&0\\ 1&1&1&0&0&0&0\\ 0&0&1&1&1&0&1\\ 0&0&1&1&1&1&0 \end{pmatrix}$ | 1344 |
| $6A$ | $\begin{pmatrix} 1&0&1&0&1&1&1\\ 0&0&1&0&1&1&0\\ 1&0&0&0&0&1&1\\ 0&1&0&0&0&0&1\\ 1&0&0&1&0&0&1\\ 1&1&1&0&0&0&1\\ 1&1&1&0&0&1&0 \end{pmatrix}$ | 1120 | $6B$ | $\begin{pmatrix} 1&0&1&1&1&1&1\\ 1&1&0&0&0&1&1\\ 1&0&0&0&0&1&1\\ 1&0&1&0&1&0&0\\ 1&0&1&1&0&0&0\\ 0&0&1&0&0&1&0\\ 0&0&1&0&0&0&1 \end{pmatrix}$ | 1120 |
| $6C$ | $\begin{pmatrix} 0&0&1&1&1&0&1\\ 0&1&0&1&0&0&1\\ 1&0&0&1&0&1&1\\ 0&0&0&0&1&1&1\\ 0&1&0&0&1&0&0\\ 0&1&0&0&0&1&0\\ 0&1&0&0&0&0&1 \end{pmatrix}$ | 1680 | $6D$ | $\begin{pmatrix} 1&0&0&0&1&1&1\\ 0&0&1&0&1&1&1\\ 1&0&1&1&0&1&1\\ 0&0&1&1&1&1&0\\ 1&1&1&0&0&0&1\\ 0&0&0&0&1&0&1\\ 0&0&0&0&1&1&0 \end{pmatrix}$ | 3360 |
| $6E$ | $\begin{pmatrix} 1&0&1&0&0&0&1\\ 1&1&1&1&1&0&1\\ 1&0&1&1&1&0&1\\ 0&0&1&0&0&0&1\\ 0&0&0&1&1&0&1\\ 1&0&0&0&1&1&1\\ 1&0&0&0&1&0&0 \end{pmatrix}$ | 3360 | $7A$ | $\begin{pmatrix} 1&1&0&1&0&0&1\\ 1&0&0&1&1&0&0\\ 1&0&1&0&1&0&0\\ 0&0&1&1&0&0&1\\ 0&1&1&0&1&0&1\\ 1&0&0&1&0&0&1\\ 1&0&0&1&0&1&0 \end{pmatrix}$ | 5760 |
| $8A$ | $\begin{pmatrix} 1&0&0&0&1&1&1\\ 1&1&1&1&0&1&1\\ 0&0&0&0&1&1&0\\ 0&1&1&0&1&1&0\\ 0&0&1&1&1&0&1\\ 1&1&1&1&0&0&1\\ 1&1&1&1&0&1&0 \end{pmatrix}$ | 5040 | $10A$ | $\begin{pmatrix} 0&1&0&0&0&1&0\\ 1&1&0&0&0&1&1\\ 0&0&0&0&0&0&1\\ 1&1&1&1&1&0&0\\ 1&0&1&0&0&0&1\\ 1&0&1&1&0&0&1\\ 1&0&1&1&0&1&0 \end{pmatrix}$ | 4032 |
| $12A$ | $\begin{pmatrix} 0&0&1&1&0&1&0\\ 0&0&0&1&1&1&1\\ 0&1&1&0&0&0&1\\ 1&0&1&1&0&1&0\\ 1&1&1&0&0&0&0\\ 1&1&1&0&1&1&0\\ 1&1&1&0&1&0&1 \end{pmatrix}$ | 3360 | $15A$ | $\begin{pmatrix} 1&0&1&1&1&1&0\\ 1&1&0&0&0&1&1\\ 1&0&1&0&1&0&0\\ 1&0&0&0&0&1&1\\ 1&0&1&1&0&0&0\\ 1&1&0&1&1&1&0\\ 1&1&0&1&1&0&1 \end{pmatrix}$ | 2688 |

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$S_8$ has 22 conjugacy classes and under the action of $S_8$ on $2^7$ we obtained six orbits of lengths 1, 1, 28, 28, 35 and 35. The point stabilizers for the orbits of lengths 1, 28 and 35 are $S_8$ , $S_6 \times 2$ and $(S_4 \times S_4) : 2$ of indices 1, 28 and 35, respectively in $S_8$. We used Programme A in Magma [7] due to Ali [1] to compute the orbit lengths and the corresponding stabilizers. See Appendix A for Programme A. Let $\chi(S_8|2^7)$ be the permutation character of $S_8$ on $2^7$. We also let $\chi(S_8|S_6 \times 2)$ and $\chi(S_8|(S_4 \times S_4) : 2)$ be the permutation characters of $S_8$ on $S_6 \times 2$ and $(S_4 \times S_4) : 2$, respectively. The permutation characters $\chi(S_8|S_6 \times 2) = 1a + 7a + 20a$ and $\chi(S_8|(S_4 \times S_4) : 2) = 1a + 14a + 20a$ are written in terms of the irreducible characters of $S_8$ and are computed directly using the character table of $S_8$.

We obtain that $\chi(S_8|2^7) = I^{S_8}_{S_8} + I^{S_8}_{S_8} + I^{S_8}_{S_6\times 2} + I^{S_8}_{S_6\times 2} + I^{S_8}_{(S_4\times S_4):2} + I^{S_8}_{(S_4\times S_4):2}$, where $I^{S_8}_{S_6\times 2}$ and $I^{S_8}_{(S_4\times S_4):2}$ are the identity characters of $S_6 \times 2$ and $(S_4 \times S_4) : 2$, respectively induced to $S_8$. We note that $I^{S_8}_{S_6\times 2} = \chi(S_8|S_6 \times 2)$ and $I^{S_8}_{(S_4\times S_4):2} = \chi(S_8|(S_4 \times S_4) : 2)$. Therefore

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$$\chi(S_8|2^7) = I^{S_8}_{S_8} + I^{S_8}_{S_8} + I^{S_8}_{S_6\times 2} + I^{S_8}_{S_6\times 2} + I^{S_8}_{(S_4\times S_4):2} + I^{S_8}_{(S_4\times S_4):2}$$

$$= 1a + 1a + 1a + 7a + 20a + 1a + 7a + 20a + 1a + 14a + 20a + 1a + 14a + 20a$$

$$= 6 \times 1a + 2 \times 7a + 2 \times 14a + 4 \times 20a$$

The values of $\chi(S_8|2^7)$ on the different classes of $S_8$ determine the number $l$ of fixed points of each $q \in S_8$ in $2^7$. For example $\chi(S_8|2^7)(2A) = (4 \times 1a + 2 \times 7a + 2 \times 14a + 4 \times 20a)(2A) = 6 \times 1 + 2 \times 5 + 2 \times 4 + 4 \times 10 = 64$ is the value of $\chi(S_8|2^7)$ on the class $2A$ of $S_8$, that is, the action of any element $q \in 2A$ is fixing 64 elements in $2^7$. These values of the $l$'s will enable us to calculate the conjugacy classes of $2^7 : S_8$ and are listed in the table below.

Table 7.2: The values of $\chi(S_8|2^7)$ on the different classes of $S_8$

| $[q]_{S_8}$ | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $3A$ | $3B$ | $4A$ | $4B$ | $4C$ | $4D$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(S_8\|S_8)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(S_8\|S_8)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(S_8\|S_6 \times 2)$ | 28 | 16 | 4 | 8 | 4 | 10 | 1 | 6 | 0 | 2 | 2 |
| $\chi(S_8\|S_6 \times 2)$ | 28 | 16 | 4 | 8 | 4 | 10 | 1 | 6 | 0 | 2 | 2 |
| $\chi(S_8\|(S_4 \times S_4) : 2)$ | 35 | 15 | 11 | 7 | 3 | 5 | 2 | 1 | 3 | 5 | 1 |
| $\chi(S_8\|(S_4 \times S_4) : 2)$ | 35 | 15 | 11 | 7 | 3 | 5 | 2 | 1 | 3 | 5 | 1 |
| $l$ | 128 | 64 | 32 | 32 | 16 | 32 | 8 | 16 | 8 | 16 | 8 |

| $[q]_{S_8}$ | $5A$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $7A$ | $8A$ | $10A$ | $12A$ | $15A$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(S_8\|S_8)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(S_8\|S_8)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(S_8\|S_6 \times 2)$ | 3 | 1 | 4 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| $\chi(S_8\|S_6 \times 2)$ | 3 | 1 | 4 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| $\chi(S_8\|(S_4 \times S_4) : 2)$ | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 |
| $\chi(S_8\|(S_4 \times S_4) : 2)$ | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 |
| $l$ | 8 | 4 | 16 | 8 | 4 | 8 | 2 | 4 | 4 | 4 | 2 |

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These values of $l$ enabled us to determine the number $f_j$ of orbits $Q_i$'s, $1 \leq i \leq l$ which have fused together under the action of $C_{S_8}(q)$ ,for each class representative $q \in S_8$ , to form one orbit $\triangle_f$. We used programme A in MAGMA [7] due to Ali[1] to calculate these $f_j$'s. Programme A is contained in Appendix A. We obtained that $2^7 : S_8$ has exactly 128 conjugacy classes of elements. These values of the $f_j$'s, the length of each class $[y]_{2^7:S_8}$ and its corresponding centralizer $C_{2^7:S_8}(y)$ are listed in Table 7.3. We also list the $d_j$'s where $d_j q$ is a representative of the $\triangle_f$.

For example if $q = 4A$, then $l = 16$, $f_1 = 1$, $f_2 = 1$, $f_3 = 3$, $f_4 = 3$, $f_5 = 4$ and $f_6 = 4$. Hence we produce six corresponding classes $[g_1]_G$, $[g_2]_G$, $[g_3]_G$, $[g_4]_G$, $[g_5]_G$ and $[g_6]_G$. For $[g_1]_G$, we have

$$|C_G(g_1)| = \frac{l|C_Q(q)|}{f_1} = \frac{16 \times 96}{1} = 1536$$

and

$$|[g_1]_G| = \frac{|G|}{|C_G(g_1)|} = 3360$$

Similarly, for $[g_2]_G$ we obtain $|C_G(g_2)| = 1536$ and $|[g_2]_G| = 3360$.

For $[g_3]_G$, we have

$$|C_G(g_3)| = \frac{l|C_Q(q)|}{f_3} = \frac{16 \times 96}{3} = 512$$

$$\text{and} \qquad |[g_3]_G| = \frac{|G|}{|C_G(g_3)|} = 10080$$

Similarly, for $[g_4]_G$ we obtain $|C_G(g_4)| = 512$ and $|[g_4]_G| = 10080$.

For $[g_5]_G$, we have

$$|C_G(g_5)| = \frac{l|C_Q(q)|}{f_5} = \frac{16 \times 96}{4} = 384$$

$$\text{and} \qquad |[g_5]_G| = \frac{|G|}{|C_G(g_5)|} = 13440$$

Similarly, for $[g_6]_G$ we obtain $|C_G(g_6)| = 384$ and $|[g_6]_G| = 13440$.

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By theorem 3.3.4 and remark 3.3.5, we have

$$o(dq) = \{^{m \quad if \quad w=1_K}_{2m \quad otherwise} \ ,$$

for the class representative $dq \in G$ where $d \in 2^7$ , $q \in S_8$ and $o(q) = m$. The above result together with the programme B Ali[1] developed in MAGMA, enabled us to compute the orders of the various class representatives of $2^7 : S_8$. See Appendix A for Programme B .

For example for $q = 4A$ and for $[g_1]_G$, $[g_2]_G$, $[g_3]_G$ and $[g_4]_G$, we obtain $w =$ (0,0,0,0,0,0) $= 1_K$ and hence $o(dq) = 2$. Thus we obtain that the order of elements in the corresponding classes $[g_1]_G$, $[g_2]_G$, $[g_3]_G$ and $[g_4]_G$ is 2 and we represent these classes of $G$ by $4S$, $4T$, $4U$ and $4V$. Similarly, we obtain $w =$ (0,0,0,0,1,1,0) for the classes $[g_5]_G$ and $[g_6]_G$ and hence $o(dq) = 2 \times 2 = 4$. Therefore the order of the elements in the classes $[g_5]_G$ and $[g_6]_G$ is 4 and hence the corresponding classes $8A$ and $8B$ in $G$. Table 7.3 below contains all the relevant information regarding the conjugacy classes of $2^7 : S_8$

Table 7.3: The conjugacy classes of elements of $G = 2^7 : S_8$

| $[g]_{Sp_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:Sp_6(2)}$ | $\lvert[g]_{2^7:Sp_6(2)}\rvert$ | $C_{2^7:Sp_6(2)}(g)$ |
|---|---|---|---|---|---|---|---|
| $1A$ | 128 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $1A$ | 1 | 5160960 |
| | | $f_2 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,1,1)$ | $2A$ | 1 | 5160960 |
| | | $f_3 = 28$ | $(1,1,1,1,1,0,1)$ | $(1,1,1,1,1,0,1)$ | $2B$ | 28 | 184320 |
| | | $f_4 = 28$ | $(1,1,1,1,1,1,0)$ | $(1,1,1,1,1,1,0)$ | $2C$ | 28 | 184320 |
| | | $f_5 = 35$ | $(1,1,1,1,1,1,1)$ | $(1,1,1,1,1,1,1)$ | $2D$ | 35 | 147456 |
| | | $f_6 = 35$ | $(1,1,1,1,1,0,0)$ | $(1,1,1,1,1,0,0)$ | $2E$ | 35 | 147456 |
| $2A$ | 64 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2F$ | 56 | 92160 |
| | | $f_2 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2G$ | 56 | 92160 |
| | | $f_3 = 6$ | $(1,1,1,1,0,1,1)$ | $(1,1,0,1,1,0,0)$ | $4A$ | 336 | 15360 |
| | | $f_4 = 6$ | $(1,0,0,1,1,1,1)$ | $(1,1,0,1,1,0,0)$ | $4B$ | 336 | 15360 |
| | | $f_5 = 10$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,1,0,0)$ | $4C$ | 560 | 9216 |
| | | $f_6 = 10$ | $(1,1,1,0,1,0,1)$ | $(1,1,0,1,1,0,0)$ | $4D$ | 560 | 9216 |
| | | $f_7 = 15$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2H$ | 840 | 6144 |
| | | $f_8 = 15$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2I$ | 840 | 6144 |
| $2B$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2J$ | 420 | 12288 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2K$ | 420 | 12288 |
| | | $f_3 = 1$ | $(0,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2L$ | 420 | 12288 |
| | | $f_4 = 1$ | $(0,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2M$ | 420 | 12288 |
| | | $f_5 = 2$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2N$ | 840 | 6144 |
| | | $f_6 = 2$ | $(1,0,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2O$ | 840 | 6144 |
| | | $f_7 = 12$ | $(1,1,0,1,1,1,1)$ | $(0,0,1,0,0,0,1)$ | $4E$ | 5040 | 1024 |
| | | $f_8 = 12$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,0,0,0,1)$ | $4F$ | 5040 | 1024 |
| $2C$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2P$ | 840 | 6144 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2Q$ | 840 | 6144 |
| | | $f_3 = 1$ | $(1,0,1,0,1,1,0)$ | $(0,0,0,0,1,1,0)$ | $4G$ | 840 | 6144 |
| | | $f_4 = 1$ | $(1,0,1,0,1,0,1)$ | $(0,0,0,0,1,1,0)$ | $4H$ | 840 | 6144 |
| | | $f_5 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,1,1,0)$ | $4I$ | 2520 | 2048 |
| | | $f_6 = 3$ | $(1,1,1,0,0,1,1)$ | $(0,0,0,0,1,1,0)$ | $4J$ | 2520 | 2048 |
| | | $f_7 = 3$ | $(1,0,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2R$ | 2520 | 2048 |
| | | $f_8 = 3$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2S$ | 2520 | 2048 |
| | | $f_9 = 8$ | $(1,1,0,1,1,1,1)$ | $(1,1,1,1,0,1,1)$ | $4K$ | 6720 | 768 |
| | | $f_{10} = 8$ | $(0,1,1,1,1,1,1)$ | $(1,1,1,1,1,0,1)$ | $4L$ | 6720 | 768 |
| $2D$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2T$ | 3360 | 1536 |
| | | $f_2 = 1$ | $(1,0,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2U$ | 3360 | 1536 |
| | | $f_3 = 1$ | $(1,1,1,0,0,1,1)$ | $(1,0,0,0,0,1,0)$ | $4M$ | 3360 | 1536 |
| | | $f_4 = 1$ | $(1,0,1,1,1,1,1)$ | $(1,0,0,0,0,1,0)$ | $4N$ | 3360 | 1536 |
| | | $f_5 = 3$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,1,0,1)$ | $4O$ | 10080 | 512 |
| | | $f_6 = 3$ | $(1,1,1,0,1,1,1)$ | $(0,1,0,1,1,1,1)$ | $4P$ | 10080 | 512 |
| | | $f_7 = 3$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,0,1,1,0)$ | $4Q$ | 10080 | 512 |
| | | $f_8 = 3$ | $(1,1,1,0,1,0,1)$ | $(1,0,1,0,1,0,0)$ | $4R$ | 10080 | 512 |
| $3A$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3A$ | 448 | 11520 |
| | | $f_2 = 1$ | $(1,0,0,1,1,1,1)$ | $(0,0,0,0,0,1,1)$ | $6A$ | 448 | 11520 |
| | | $f_3 = 5$ | $(1,1,1,1,1,0,1)$ | $(0,1,1,0,0,0,1)$ | $6B$ | 2240 | 2304 |
| | | $f_4 = 5$ | $(1,1,1,1,1,1,0)$ | $(0,1,1,0,0,1,0)$ | $6C$ | 2240 | 2304 |
| | | $f_5 = 10$ | $(1,1,1,1,1,1,1)$ | $(0,1,1,0,0,1,1)$ | $6D$ | 4480 | 1152 |
| | | $f_6 = 10$ | $(0,1,1,1,1,1,1)$ | $(0,1,1,1,1,1,1)$ | $6E$ | 4480 | 1152 |
| $3B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3B$ | 17920 | 288 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,1,1)$ | $6F$ | 17920 | 288 |
| | | $f_3 = 1$ | $(1,1,1,1,0,1,1)$ | $(1,0,0,0,0,1,0)$ | $6G$ | 17920 | 288 |
| | | $f_4 = 1$ | $(0,1,1,1,1,0,1)$ | $(1,0,0,0,0,0,1)$ | $6H$ | 17920 | 288 |
| | | $f_5 = 2$ | $(1,1,1,0,1,1,1)$ | $(1,1,0,0,1,1,0)$ | $6I$ | 35840 | 144 |
| | | $f_6 = 2$ | $(0,1,1,1,1,1,1)$ | $(0,1,0,0,1,1,1)$ | $6J$ | 35840 | 144 |
| $4A$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4S$ | 3360 | 1536 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4T$ | 3360 | 1536 |
| | | $f_3 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4U$ | 10080 | 512 |
| | | $f_4 = 3$ | $(1,0,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4V$ | 10080 | 512 |
| | | $f_5 = 4$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,1,1,0)$ | $8A$ | 13440 | 384 |
| | | $f_6 = 4$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,1,1,0)$ | $8B$ | 13440 | 384 |

Table 7.3 :The conjugacy classes of elements of $G = 2^7 : S_8$(continued)

| $[q]_{Sp_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:Sp_6(2)}$ | $\lvert[g]_{2^7:Sp_6(2)}\rvert$ | $C_{2^7:Sp_6(2)}(g)$ |
|---|---|---|---|---|---|---|---|
| $4B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4W$ | 20160 | 256 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4X$ | 20160 | 256 |
| | | $f_3 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4Y$ | 20160 | 256 |
| | | $f_4 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4Z$ | 20160 | 256 |
| | | $f_5 = 2$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AA$ | 40320 | 128 |
| | | $f_6 = 2$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AB$ | 40320 | 128 |
| $4C$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AC$ | 10080 | 512 |
| | | $f_2 = 1$ | $(1,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AD$ | 10080 | 512 |
| | | $f_3 = 1$ | $(0,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AE$ | 10080 | 512 |
| | | $f_4 = 1$ | $(1,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AF$ | 10080 | 512 |
| | | $f_5 = 2$ | $(1,1,1,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4AG$ | 20160 | 256 |
| | | $f_6 = 2$ | $(1,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4AH$ | 20160 | 256 |
| | | $f_7 = 4$ | $(1,1,1,1,1,1,1)$ | $(1,0,0,0,0,1,1)$ | $8C$ | 40320 | 128 |
| | | $f_8 = 4$ | $(0,1,1,1,1,1,1)$ | $(1,0,0,0,0,1,1)$ | $8D$ | 40320 | 128 |
| $4D$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AI$ | 40320 | 128 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4AJ$ | 40320 | 128 |
| | | $f_3 = 1$ | $(0,0,0,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4AK$ | 40320 | 128 |
| | | $f_4 = 1$ | $(1,1,1,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AL$ | 40320 | 128 |
| | | $f_5 = 1$ | $(1,0,1,1,1,1,0)$ | $(1,0,0,1,0,1,0)$ | $8E$ | 40320 | 128 |
| | | $f_6 = 1$ | $(0,1,1,1,1,1,1)$ | $(1,0,0,1,0,1,0)$ | $8F$ | 40320 | 128 |
| | | $f_7 = 1$ | $(1,0,1,1,1,0,1)$ | $(1,0,0,1,0,1,0)$ | $8G$ | 40320 | 128 |
| | | $f_8 = 1$ | $(0,1,1,1,1,0,0)$ | $(1,0,0,1,0,1,0)$ | $8H$ | 40320 | 128 |
| $5A$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $5A$ | 21504 | 240 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,1)$ | $10A$ | 21504 | 240 |
| | | $f_3 = 3$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,1,1,1,1)$ | $10B$ | 64512 | 80 |
| | | $f_4 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,0,1,0,0)$ | $10C$ | 64512 | 80 |
| $6A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6K$ | 35840 | 144 |
| | | $f_2 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6L$ | 35840 | 144 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,1)$ | $(1,0,0,1,1,0,1)$ | $12A$ | 35840 | 144 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,0,0,1,1,0,1)$ | $12B$ | 35840 | 144 |
| $6B$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6M$ | 8960 | 576 |
| | | $f_2 = 1$ | $(1,0,1,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6N$ | 8960 | 576 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,1,1,1,1)$ | $12C$ | 8960 | 576 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,1,1,1,1)$ | $12D$ | 8960 | 576 |
| | | $f_5 = 3$ | $(1,1,1,0,1,0,1)$ | $(0,0,0,1,1,1,1)$ | $12E$ | 26880 | 192 |
| | | $f_6 = 3$ | $(1,0,1,0,1,1,1)$ | $(0,0,0,1,1,1,1)$ | $12F$ | 26880 | 192 |
| | | $f_7 = 3$ | $(1,1,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6O$ | 26880 | 192 |
| | | $f_8 = 3$ | $(0,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6P$ | 26880 | 192 |
| $6C$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6Q$ | 26880 | 192 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6R$ | 26880 | 192 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,1,1,0)$ | $12G$ | 26880 | 192 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,0)$ | $(0,0,0,0,1,1,0)$ | $12H$ | 26880 | 192 |
| | | $f_5 = 2$ | $(1,1,0,1,1,1,1)$ | $(1,1,1,1,0,1,1)$ | $12I$ | 53760 | 96 |
| | | $f_6 = 2$ | $(0,1,1,1,1,1,1)$ | $(1,1,1,1,1,0,1)$ | $12J$ | 53760 | 96 |
| $6D$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6S$ | 107520 | 48 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6T$ | 107520 | 48 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,0,0,0,0,1,0)$ | $12K$ | 107520 | 48 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,0,0,0,0,1,0)$ | $12L$ | 107520 | 48 |
| $6E$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6U$ | 53760 | 96 |
| | | $f_2 = 1$ | $(1,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $6V$ | 53760 | 96 |
| | | $f_3 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6W$ | 53760 | 96 |
| | | $f_4 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6X$ | 53760 | 96 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Y$ | 107520 | 48 |
| | | $f_6 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $6Z$ | 107520 | 48 |
| $7A$ | 2 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $7A$ | 368640 | 14 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,1,1)$ | $14A$ | 368640 | 14 |
| $8A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $8I$ | 161280 | 32 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8J$ | 161280 | 32 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8K$ | 161280 | 32 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8L$ | 161280 | 32 |
| $10A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $10D$ | 129024 | 40 |
| | | $f_2 = 1$ | $(1,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $10E$ | 129024 | 40 |
| | | $f_3 = 1$ | $(0,1,1,1,1,1,1)$ | $(1,1,0,1,1,0,0)$ | $20A$ | 129024 | 40 |
| | | $f_4 = 1$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,1,0,0)$ | $20B$ | 129024 | 40 |
| $12A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12M$ | 107520 | 48 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12N$ | 107520 | 48 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,1,1,0)$ | $24A$ | 107520 | 48 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,1,1,0)$ | $24B$ | 107520 | 48 |
| $15A$ | 2 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $15A$ | 172032 | 30 |
| | | $f_2 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,1,1,1,0)$ | $30A$ | 172032 | 30 |

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### 7.1.2 The Inertia groups of $G = 2^7 : S_8$

The action of $S_8$ on the conjugacy classes of $2^7$ determine 6 orbits being formed , with respective lengths of$1, 1, 28, 28, 35$ and 35. Therefore by Brauer's Theorem (theorem 4.1.11), $S_8$ acting on $Irr(2^7)$ will also form 6 orbits of lenghts 1,$r$,$t$,$u$ and $v$ such that $r + s + t + u + v = 127$. Since $S_8 \cong A8.2$ , then from ATLAS [11] we deduce that $r = s = 35$ and $t = u = 28$ and $v = 1$ . Hence there are six inertia groups $H_i = 2^7 : \bar{H}_i$ , $i$ = 1,2,3,4,5 and 6 , such that $[G : H_1]= [G : H_2] = 1$ , $[G : H_3]= [G : H_4] = 28$ and $[G : H_5]= [G : H_6] = 35$. The $\bar{H}_i$'s are the inertia factor groups of the inertia groups , which are maximal subgroups or sit in the maximal subgroups of $S_8$ , are of indices $1, 1, 28, 28, 35$ and 35 in $S_8$, respectively. By checking the ATLAS [11] for the indices of the maximal subgroups of $S_8 \cong A8.2$ we obtain that $\bar{H}_1 = \bar{H}_2 = S_8$ , $\bar{H}_3 = \bar{H}_4 = S_6 \times 2$ and $\bar{H}_5 = \bar{H}_6 = (S_4 \times S_4) : 2$.

Note that the sum of the number of conjugacy classes of these inertia factors must in total be equal to 128, that is, the number of the conjugacy classes of $2^7 : S_8$. Also the action of $S_8$ on $Irr(2^7)$ form 6 orbits of lenghts 1, $r$, $s$, $t$, $u$ and $v$ such that $r + s + t + u + v = 127$. Hence, by checking all the indices of maximal subgroups of $S_8$ in the ATLAS [11] and all combinations that can possibly satisfy the previous two facts, we deduce that $r = s = 35$, $t = u = 28$ and $v$= 1 are the only lengths of these orbits. $S_6 \times 2$ and $(S_4 \times S_4) : 2$ are the only copies of maximal subgroups of $S_8$, up to isomorphism, that have indices of 28 and 35 in $S_8$ .The inertia groups $S_6 \times 2$ and $(S_4 \times S_4) : 2$ are constructed from elements within $S_8$ and the generators are as follows :

$S_6 \times 2 = \langle \alpha_1, \alpha_2, \alpha_3 \rangle$ , $\alpha_1 \in 2C$ ,$\alpha_2 \in 2D$, $\alpha_3 \in 6D$ where

$$\alpha_1 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&0&1&1&0&1\\ 1&0&0&1&0&1&1\\ 1&0&0&0&1&1&1\\ 1&1&1&1&1&1&1\\ 1&1&1&1&1&0&0 \end{pmatrix} \quad , \quad \alpha_2 = \begin{pmatrix} 0&1&1&0&0&1&0\\ 0&0&1&1&0&0&0\\ 0&1&0&0&1&1&1\\ 0&0&0&0&1&1&1\\ 0&0&0&1&0&1&1\\ 1&1&1&1&1&1&1\\ 1&1&1&1&1&0&0 \end{pmatrix} \quad , \quad \alpha_2 = \begin{pmatrix} 0&0&1&1&1&0&1\\ 0&0&1&0&1&1&1\\ 0&0&0&1&0&0&0\\ 0&1&0&0&1&1&1\\ 0&0&0&0&1&0&0\\ 1&0&1&1&1&1&1\\ 1&0&1&1&1&0&0 \end{pmatrix}$$

$(S_4 \times S_4) : 2 = \langle \lambda_1, \lambda_2 \rangle$ , $\lambda_1 \in 2A$ ,$\lambda_2 \in 4C$ where

$$\lambda_1 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 1 & 1 & 0 & 1 & 0 & 0 & 1 \\ 1 & 1 & 0 & 1 & 0 & 1 & 0 \end{pmatrix} \quad , \quad \lambda_2 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 1 & 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 1 & 0 \\ 1 & 0 & 1 & 1 & 1 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 \end{pmatrix}$$

### 7.1.3 The fusions of $S_6 \times 2$ and $(S_4 \times S_4) : 2$ into $S_8$

We obtain the fusion maps of the inertia factors $S_6 \times 2$ and $(S_4 \times S_4) : 2$ , by using direct matrix conjugations in $S_8$ and the permutation characters of $S_8$ on $S_6 \times 2$ and $(S_4 \times S_4) : 2$ . MAGMA [7] was used for the various computations. The fusion maps of the inertia factor groups into $S_8$ are shown in the tables below.

Table 7.4: The fusion of $S_6 \times 2$ into $S_8$

| $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ | $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ | $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ | $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $1A$ | | $1A$ | $2F$ | | $2D$ | $4C$ | | $4D$ | $6D$ | | $6E$ |
| $2A$ | | $2A$ | $2G$ | | $2C$ | $4D$ | | $4D$ | $6E$ | | $6C$ |
| $2B$ | | $2B$ | $3A$ | | $3A$ | $5A$ | | $5A$ | $6F$ | | $6B$ |
| $2C$ | | $2C$ | $3B$ | | $3B$ | $6A$ | | $6B$ | $10A$ | | $10A$ |
| $2D$ | | $2A$ | $4A$ | | $4A$ | $6B$ | | $6A$ | | | |
| $2E$ | | $2D$ | $4B$ | | $4C$ | $6C$ | | $6D$ | | | |

Table 7.5: The fusion of $(S_4 \times S_4) : 2$ into $S_8$

| $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ | $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ | $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ | $[\bar{h}]_{S_6\times 2}$ | $\longrightarrow$ | $[q]_{S_8}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $1A$ | | $1A$ | $2E$ | | $2D$ | $4B$ | | $4C$ | $6A$ | | $6C$ |
| $2A$ | | $2C$ | $2F$ | | $2C$ | $4C$ | | $4B$ | $6B$ | | $6B$ |
| $2B$ | | $2B$ | $3A$ | | $3A$ | $4D$ | | $4B$ | $6C$ | | $6E$ |
| $2C$ | | $2A$ | $3B$ | | $3B$ | $4E$ | | $4D$ | $8A$ | | $8A$ |
| $2D$ | | $2B$ | $4A$ | | $4A$ | $4F$ | | $4C$ | $12A$ | | $12A$ |

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### 7.1.4 The Fischer-Clifford Matrices of $2^7 : S_8$

Having obtained the fusions of inertia factor groups $S_6 \times 2$ and $(S_4 \times S_4) : 2$ into $S_8$, we are now able to compute the Fischer-Clifford matrices of the group $2^7 : S_8$. We will use the relations of Proposition 5.2.3, Theorem 5.2.4, Remark 5.2.5, the properties (a) through (f) of the Fischer-Clifford matrices and the comments after Remark 5.2.5. which are given in Section 5.2. Note that all the relations hold since $2^7$ is an elementary abelian group.

For example consider the conjugacy class $1A$ of $S_8$. Then we obtain that $M(1A)$ has the following form with corresponding weights attached to the rows and columns

$$M(1A) = \begin{array}{c} \\ 40320 \\ 40320 \\ 1440 \\ 1440 \\ 1152 \\ 1152 \\ \\ \end{array} \begin{array}{c} \begin{array}{cccccc} 5160960 & 5160960 & 184320 & 184320 & 147456 & 147456 \end{array} \\ \begin{pmatrix} a & g & m & s & y & \kappa \\ b & h & n & t & z & \lambda \\ c & i & o & u & \alpha & \mu \\ d & j & p & v & \beta & \nu \\ e & k & q & w & \epsilon & \tau \\ f & l & r & x & \eta & \gamma \end{pmatrix} \\ \begin{array}{cccccc} 1 & 1 & 28 & 28 & 35 & 35 \end{array} \end{array}$$

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By Theorem 5.2.4 and property (e) of the Fischer-Clifford matrices given in Section 5.2 we have $a = g = m = s = y = \kappa = 1$, $b = 1$, $c = d = 28$, $e = f = 35$. Thus we get the following form

$$M(1A) = \begin{array}{c} \\ 40320 \\ 40320 \\ 1440 \\ 1440 \\ 1152 \\ 1152 \\ \\ \end{array} \begin{array}{c} \begin{array}{cccccc} 5160960 & 5160960 & 184320 & 184320 & 147456 & 147456 \end{array} \\ \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & h & n & t & z & \lambda \\ 28 & i & o & u & \alpha & \mu \\ 28 & j & p & v & \beta & \nu \\ 35 & k & q & w & \epsilon & \tau \\ 35 & l & r & x & \eta & \gamma \end{pmatrix} \\ \begin{array}{cccccc} 1 & 1 & 28 & 28 & 35 & 35 \end{array} \end{array}$$

We find the remaining entries of $M(1A)$ by using the properties of Fischer-Clifford matrices which are given in Section 5.2. Hence we have

$$M(1A) = \begin{array}{c} \\ 40320 \\ 40320 \\ 1440 \\ 1440 \\ 1152 \\ 1152 \\ \\ \end{array} \begin{array}{c} \begin{array}{cccccc} 5160960 & 5160960 & 184320 & 184320 & 147456 & 147456 \end{array} \\ \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 28 & -28 & 4 & -4 & 4 & -4 \\ 28 & 28 & 4 & 4 & -4 & -4 \\ 35 & -35 & -5 & 5 & -3 & 3 \\ 35 & 35 & -5 & -5 & 3 & 3 \end{pmatrix} \\ \begin{array}{cccccc} 1 & 1 & 28 & 28 & 35 & 35 \end{array} \end{array}$$

The following additional information are needed sometimes to compute these entries:

1. For $\chi$ a character of any group $H$ and $h \in H$, we have $|\chi(h)| \leq \chi(1_H)$, where $1_H$ is the identity element of $H$.

2. For $\chi$ a character of any group $H$ and $h$ a $p-$singular element of $H$, where $p$ is a prime, then we have $\chi(h) \equiv \chi(h^p) mod p$.

3. For any irreducible character $\chi$ of a group $H$ and for $h_i \in C_i$ then $d_i = \frac{b_i \chi(h_i)}{\chi(1_H)}$ is an algebraic integer, where $C_i$ is the $i-th$ conjugacy class of $H$ and $b_i = |C_i| = [H : C_H(h_i)]$. It is clear if $d_i \in \mathbb{Q}$, then $d_i \in \mathbb{Z}$.

For each class representative $q \in S_8$, we construct a Fischer-Clifford matrix $M(q)$ which are listed in Table 7.6.

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Table 7.6: The Fischer-Clifford Matrices of $2^7 : S_8$

| $M(q)$ | $M(q)$ |
|---|---|
| $M(1A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 28 & -28 & 4 & -4 & 4 & -4 \\ 28 & 28 & 4 & 4 & -4 & -4 \\ 35 & -35 & -5 & 5 & -3 & 3 \\ 35 & 35 & -5 & -5 & 3 & 3 \end{pmatrix}$ | $M(2A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 15 & -15 & 5 & -5 & 3 & -3 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 15 & 15 & 5 & 5 & -3 & -3 & -1 & -1 \\ 15 & -15 & -5 & 5 & -3 & 3 & 1 & -1 \\ 15 & 15 & -5 & -5 & 3 & 3 & -1 & -1 \end{pmatrix}$ |
| $M(2B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 4 & -4 & 4 & -4 & 4 & -4 & 0 & 0 \\ 4 & 4 & 4 & 4 & -4 & -4 & 0 & 0 \\ 3 & -3 & 3 & -3 & -3 & 3 & -1 & 1 \\ 8 & -8 & -8 & 8 & 0 & 0 & 0 & 0 \\ 3 & 3 & 3 & 3 & 3 & 3 & -1 & -1 \\ 8 & 8 & -8 & -8 & 0 & 0 & 0 & 0 \end{pmatrix}$ | $M(2C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 2 & -2 & 2 & -2 & -2 & 2 & 2 & -2 & 0 & 0 \\ 6 & -6 & -6 & 6 & -2 & 2 & -2 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & -2 & -2 & 2 & 2 & 0 & 0 \\ 6 & 6 & 6 & 6 & -2 & -2 & -2 & -2 & 0 & 0 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 6 & -6 & 6 & -6 & 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 6 & 6 & -6 & -6 & 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(2D) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 3 & -3 & -3 & 3 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 3 & 3 & -3 & -3 & -1 & 1 & 1 & -1 \\ 3 & -3 & 3 & -3 & -1 & -1 & 1 & 1 \\ 3 & 3 & 3 & 3 & -1 & -1 & -1 & -1 \end{pmatrix}$ | $M(3A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 10 & -10 & 2 & -2 & 2 & -2 \\ 10 & 10 & 2 & 2 & -2 & -2 \\ 5 & -5 & -3 & 3 & -1 & 1 \\ 5 & 5 & -3 & -3 & 1 & 1 \end{pmatrix}$ |
| $M(3B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ | $M(4A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 6 & -6 & -2 & 2 & 0 & 0 \\ 6 & 6 & -2 & -2 & 0 & 0 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(4B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ | $M(4C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 2 & -2 & -2 & 2 & -2 & 2 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 \end{pmatrix}$ |

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Table 7.6 The Fischer-Clifford Matrices of $2^7 : S_8$(continued)

| $M(q)$ | $M(q)$ |
|---|---|
| $M(4D) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \end{pmatrix}$ | $M(5A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 3 & -3 & -1 & 1 \\ 3 & 3 & -1 & -1 \end{pmatrix}$ |
| $M(6A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(6B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 3 & -3 & -3 & 3 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 3 & 3 & 3 & 3 & -1 & -1 & -1 & -1 \\ 3 & -3 & 3 & -3 & 1 & -1 & 1 & -1 \\ 3 & 3 & -3 & -3 & 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(6C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & 2 & -2 & -2 & 0 & 0 \\ 1 & -1 & -1 & 1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(6D) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(6E) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & -2 & -2 & 2 & 0 & 0 \end{pmatrix}$ | $M(7A) = \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$ |
| $M(8A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(10A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(12A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(15A) = \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$ |

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### 7.1.5 Character Table of $2^7 : S_8$

The character table of $G = 2^7 : S_8$ was constructed through the above Fischer-Clifford Matrices and the character tables of the 6 inertia factors groups together with their respective fusion maps into $S_8$. We used Magma [7] to compute the character tables of the inertia factor groups. We partitioned the set of irreducible characters of $G = 2^7 : S_8$ into 6 blocks $B_1$ , $B_2$ , $B_3$ , $B_4$ , $B_5$ and $B_6$ corresponding to the inertia factor groups $\bar{H}_1$, $\bar{H}_2$, $\bar{H}_3$, $\bar{H}_4$, $\bar{H}_5$ and $\bar{H}_6$ respectively. Therefore $Irr(G = 2^7 : S_8) = \bigcup_{i=1}^{6} B_i$, where $B_1 = \{\chi_j | 1 \leq j \leq 22\}$, $B_2 = \{\chi_j | 23 \leq j \leq 44\}$, $B_3 = \{\chi_j | 45 \leq j \leq 66\}$, $B_4 = \{\chi_j | 67 \leq j \leq 88\}$, $B_5 = \{\chi_j | 89 \leq j \leq 108\}$ and $B_6 = \{\chi_j | 109 \leq j \leq 128\}$. The complete character table is given in Table 7.7 .

Table 7.7: Character table of $G = 2^7 : S_8$

| | $1A$ | | | | | | $2A$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $4A$ | $4B$ | $4C$ | $4D$ | $2H$ | $2I$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_4$ | 7 | 7 | 7 | 7 | 7 | 7 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_5$ | 14 | 14 | 14 | 14 | 14 | 14 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_6$ | 14 | 14 | 14 | 14 | 14 | 14 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_7$ | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_8$ | 20 | 20 | 20 | 20 | 20 | 20 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_9$ | 21 | 21 | 21 | 21 | 21 | 21 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{10}$ | 21 | 21 | 21 | 21 | 21 | 21 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 |
| $\chi_{11}$ | 28 | 28 | 28 | 28 | 28 | 28 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{12}$ | 28 | 28 | 28 | 28 | 28 | 28 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{13}$ | 35 | 35 | 35 | 35 | 35 | 35 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{14}$ | 35 | 35 | 35 | 35 | 35 | 35 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{15}$ | 42 | 42 | 42 | 42 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 56 | 56 | 56 | 56 | 56 | 56 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{17}$ | 56 | 56 | 56 | 56 | 56 | 56 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{18}$ | 64 | 64 | 64 | 64 | 64 | 64 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| $\chi_{19}$ | 64 | 64 | 64 | 64 | 64 | 64 | -16 | -16 | -16 | -16 | -16 | -16 | -16 | -16 |
| $\chi_{20}$ | 70 | 70 | 70 | 70 | 70 | 70 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{21}$ | 70 | 70 | 70 | 70 | 70 | 70 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{22}$ | 90 | 90 | 90 | 90 | 90 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{24}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{25}$ | 7 | -7 | 7 | -7 | -7 | 7 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 |
| $\chi_{26}$ | 7 | -7 | 7 | -7 | -7 | 7 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{27}$ | 14 | -14 | 14 | -14 | -14 | 14 | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{28}$ | 14 | -14 | 14 | -14 | -14 | 14 | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{29}$ | 20 | -20 | 20 | -20 | -20 | 20 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 |
| $\chi_{30}$ | 20 | -20 | 20 | -20 | -20 | 20 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{31}$ | 21 | -21 | 21 | -21 | -21 | 21 | 9 | -9 | 9 | -9 | -9 | 9 | -9 | 9 |
| $\chi_{32}$ | 21 | -21 | 21 | -21 | -21 | 21 | -9 | 9 | -9 | 9 | 9 | -9 | 9 | -9 |
| $\chi_{33}$ | 28 | -28 | 28 | -28 | -28 | 28 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 |
| $\chi_{34}$ | 28 | -28 | 28 | -28 | -28 | 28 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{35}$ | 35 | -35 | 35 | -35 | -35 | 35 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 |
| $\chi_{36}$ | 35 | -35 | 35 | -35 | -35 | 35 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{37}$ | 42 | -42 | 42 | -42 | -42 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 56 | -56 | 56 | -56 | -56 | 56 | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{39}$ | 56 | -56 | 56 | -56 | -56 | 56 | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{40}$ | 64 | -64 | 64 | -64 | -64 | 64 | 16 | -16 | 16 | -16 | -16 | 16 | - 16 | 16 |
| $\chi_{41}$ | 64 | -64 | 64 | -64 | -64 | 64 | -16 | 16 | -16 | 16 | 16 | -16 | 16 | - 16 |
| $\chi_{42}$ | 70 | -70 | 70 | -70 | -70 | 70 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 |
| $\chi_{43}$ | 70 | -70 | 70 | -70 | -70 | 70 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{44}$ | 90 | -90 | 90 | -90 | -90 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 28 | -28 | 4 | -4 | 4 | -4 | 16 | -16 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{46}$ | 28 | -28 | 4 | -4 | 4 | -4 | -14 | 14 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{47}$ | 28 | -28 | 4 | -4 | 4 | -4 | 14 | -14 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{48}$ | 28 | -28 | 4 | -4 | 4 | -4 | -16 | 16 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{49}$ | 140 | -140 | 20 | -20 | 20 | -20 | -50 | 50 | -10 | 10 | -14 | 14 | 2 | -2 |
| $\chi_{50}$ | 140 | -140 | 20 | -20 | 20 | -20 | -20 | 20 | 0 | 0 | -8 | 8 | 4 | -4 |
| $\chi_{51}$ | 140 | -140 | 20 | -20 | 20 | -20 | 10 | -10 | 10 | -10 | -2 | 2 | 6 | -6 |
| $\chi_{52}$ | 140 | -140 | 20 | -20 | 20 | -20 | 40 | -40 | 20 | -20 | 4 | -4 | 8 | -8 |
| $\chi_{53}$ | 140 | -140 | 20 | -20 | 20 | -20 | -40 | 40 | -20 | 20 | -4 | 4 | -8 | 8 |
| $\chi_{54}$ | 140 | -140 | 20 | -20 | 20 | -20 | -10 | 10 | -10 | 10 | 2 | -2 | -6 | 6 |
| $\chi_{55}$ | 140 | -140 | 20 | -20 | 20 | -20 | 20 | -20 | 0 | 0 | 8 | -8 | -4 | 4 |
| $\chi_{56}$ | 140 | -140 | 20 | -20 | 20 | -20 | 50 | -50 | 10 | -10 | 14 | -14 | -2 | 2 |
| $\chi_{57}$ | 252 | -252 | 36 | -36 | 36 | -36 | 36 | -36 | 24 | -24 | 0 | 0 | 12 | -12 |
| $\chi_{58}$ | 252 | -252 | 36 | -36 | 36 | -36 | -54 | 54 | -6 | 6 | -18 | 18 | 6 | -6 |
| $\chi_{59}$ | 252 | -252 | 36 | -36 | 36 | -36 | 54 | -54 | 6 | -6 | 18 | -18 | -6 | 6 |
| $\chi_{60}$ | 252 | -252 | 36 | -36 | 36 | -36 | -36 | 36 | -24 | 24 | 0 | 0 | -12 | 12 |
| $\chi_{61}$ | 280 | -280 | 40 | -40 | 40 | -40 | -40 | 40 | 0 | 0 | -16 | 16 | 8 | -8 |
| $\chi_{62}$ | 280 | -280 | 40 | -40 | 40 | -40 | 20 | -20 | 20 | -20 | -4 | 4 | 12 | -12 |
| $\chi_{63}$ | 280 | -280 | 40 | -40 | 40 | -40 | -20 | 20 | -20 | 20 | 4 | -4 | -12 | 12 |
| $\chi_{64}$ | 280 | -280 | 40 | -40 | 40 | -40 | 40 | -40 | 0 | 0 | 16 | -16 | -8 | 8 |
| $\chi_{65}$ | 448 | -448 | 64 | -64 | 64 | -64 | -16 | 16 | 16 | -16 | -16 | 16 | 16 | -16 |
| $\chi_{66}$ | 448 | -448 | 64 | -64 | 64 | -64 | 16 | -16 | -16 | 16 | 16 | -16 | -16 | 16 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $2B$ | | | | | | | | $2C$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ | $2O$ | $4E$ | $4F$ | $2P$ | $2Q$ | $4G$ | $4H$ | $4I$ | $4J$ | $2R$ | $2S$ | $4K$ | $4L$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_5$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_7$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_8$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{12}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{13}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{14}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{15}$ | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{16}$ | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{21}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{22}$ | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 |
| $\chi_{23}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{24}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{25}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{26}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{27}$ | 6 | -6 | 6 | -6 | -6 | 6 | 6 | -6 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{28}$ | 6 | -6 | 6 | -6 | -6 | 6 | 6 | -6 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{29}$ | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{30}$ | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{31}$ | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{32}$ | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{33}$ | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{34}$ | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{35}$ | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | -5 | 5 | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 |
| $\chi_{36}$ | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | -5 | 5 | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 |
| $\chi_{37}$ | -6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{38}$ | 8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{43}$ | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{44}$ | -6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 | -6 | 6 | 6 | -6 |
| $\chi_{45}$ | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{47}$ | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{48}$ | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{50}$ | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{52}$ | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{53}$ | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{54}$ | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{55}$ | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{57}$ | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{58}$ | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{59}$ | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{60}$ | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{61}$ | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 | -8 | 8 | 16 | -16 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{62}$ | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 | -16 | 16 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 | -16 | 16 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 | -8 | 8 | 16 | -16 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $2D$ | | | | | | | | $3A$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2T$ | $2U$ | $4M$ | $4N$ | $4O$ | $4P$ | $4Q$ | $4R$ | $3A$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_8$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi_{11}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{13}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{14}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | -6 | -6 | -6 | -6 |
| $\chi_{16}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{17}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{20}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{21}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{24}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{25}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{26}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{29}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 5 | -5 | 5 | -5 | -5 | 5 |
| $\chi_{30}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 5 | -5 | 5 | -5 | -5 | 5 |
| $\chi_{31}$ | -3 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | 6 | -6 | 6 | -6 | -6 | 6 |
| $\chi_{32}$ | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 6 | -6 | 6 | -6 | -6 | 6 |
| $\chi_{33}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{34}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{35}$ | -3 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | 5 | -5 | 5 | -5 | -5 | 5 |
| $\chi_{36}$ | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 5 | -5 | 5 | -5 | -5 | 5 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | -6 | 6 | 6 | -6 |
| $\chi_{38}$ | 4 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{39}$ | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{42}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -5 | 5 | -5 | 5 | 5 | -5 |
| $\chi_{43}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -5 | 5 | -5 | 5 | 5 | -5 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{46}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{47}$ | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{48}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{49}$ | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 20 | -20 | 4 | -4 | 4 | -4 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -10 | 10 | -2 | 2 | -2 | 2 |
| $\chi_{51}$ | -6 | 6 | 6 | -6 | -2 | 2 | -2 | 2 | -10 | 10 | -2 | 2 | -2 | 2 |
| $\chi_{52}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 20 | -20 | 4 | -4 | 4 | -4 |
| $\chi_{53}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 20 | -20 | 4 | -4 | 4 | -4 |
| $\chi_{54}$ | 6 | -6 | -6 | 6 | 2 | -2 | 2 | -2 | -10 | 10 | -2 | 2 | -2 | 2 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | -10 | 10 | -2 | 2 | -2 | 2 |
| $\chi_{56}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 20 | -20 | 4 | -4 | 4 | -4 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | -6 | 6 | 6 | -6 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 6 | -6 | -6 | 6 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 8 | -8 | -8 | 8 | 0 | 0 | 0 | -0 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{62}$ | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{63}$ | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{64}$ | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -20 | 20 | -4 | 4 | -4 | 4 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -20 | 20 | -4 | 4 | -4 | 4 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $3B$ | | | | | | $4A$ | | | | | | $4B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $3B$ | $6F$ | $6G$ | $6H$ | $6I$ | $6J$ | $4S$ | $4T$ | $4U$ | $4V$ | $8A$ | $8B$ | $4W$ | $4X$ | $4Y$ | $4Z$ | $4AA$ | $4AB$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_7$ | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{16}$ | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 1 | 1 | 1 | 1 | 1 | 1 | -4 | -4 | -4 | -4 | -4 | -4 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{21}$ | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{23}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{24}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{25}$ | 1 | -1 | 1 | -1 | -1 | 1 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{26}$ | 1 | -1 | 1 | -1 | -1 | 1 | -3 | 3 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{27}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{28}$ | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{29}$ | -1 | 1 | -1 | 1 | 1 | -1 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -1 | 1 | -1 | 1 | 1 | -1 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{33}$ | 1 | -1 | 1 | -1 | -1 | 1 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | -1 | 1 | -1 | -1 | 1 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 2 | -2 | 2 | -2 | -2 | 2 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{36}$ | 2 | -2 | 2 | -2 | -2 | 2 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{38}$ | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | 1 | -1 | 1 | -1 | -1 | 1 | -4 | 4 | -4 | 4 | -4 | 4 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{43}$ | 1 | -1 | 1 | -1 | -1 | 1 | 4 | -4 | 4 | -4 | 4 | -4 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{45}$ | 1 | -1 | 1 | -1 | 1 | -1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 1 | -1 | 1 | -1 | 1 | -1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 1 | -1 | 1 | -1 | 1 | -1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 1 | -1 | 1 | -1 | 1 | -1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -1 | 1 | -1 | 1 | -1 | 1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 2 | -2 | 2 | -2 | 2 | -2 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 2 | -2 | 2 | -2 | 2 | -2 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | -1 | 1 | -1 | 1 | -1 | 1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -1 | 1 | -1 | 1 | -1 | 1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 2 | -2 | 2 | -2 | 2 | -2 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 2 | -2 | 2 | -2 | 2 | -2 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | -1 | 1 | -1 | 1 | -1 | 1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $4C$ | | | | | | | | $4D$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $4AG$ | $4AH$ | $8C$ | $8D$ | $4AI$ | $4AJ$ | $4AK$ | $4AL$ | $8E$ | $8F$ | $8G$ | $8H$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_6$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_7$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{23}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{24}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{25}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{26}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{27}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{32}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{33}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{36}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{38}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{45}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{47}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{48}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{50}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{52}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{55}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{57}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{59}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{60}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $5A$ | | | | $6A$ | | | | $6B$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $5A$ | $10A$ | $10B$ | $10C$ | $6K$ | $6L$ | $12A$ | $12B$ | $6M$ | $6N$ | $12C$ | $12D$ | $12E$ | $12F$ | $6O$ | $6P$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_4$ | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_8$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{15}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{24}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{25}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{26}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{27}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{32}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{33}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{36}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{38}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{45}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{47}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{48}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{50}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{52}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{55}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{57}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{59}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{60}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $6C$ | | | | | | $6D$ | | | | $6E$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6Q$ | $6R$ | $12G$ | $12H$ | $12I$ | $12J$ | $6S$ | $6T$ | $12K$ | $12L$ | $6U$ | $6V$ | $6W$ | $6X$ | $6Y$ | $6Z$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_6$ | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_7$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_8$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_9$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{12}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{24}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{27}$ | -1 | 1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | -1 | 1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{30}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{31}$ | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{34}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{35}$ | 1 | -1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 1 | -1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{39}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{43}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 2 | -2 | 2 | -2 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{46}$ | -2 | 2 | -2 | 2 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{47}$ | -2 | 2 | -2 | 2 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{48}$ | 2 | -2 | 2 | -2 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{50}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{54}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | -2 | 2 | -2 | 2 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{62}$ | 2 | -2 | 2 | -2 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{63}$ | 2 | -2 | 2 | -2 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{64}$ | -2 | 2 | -2 | 2 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $7A$ | | $8A$ | | | | $10A$ | | | | $12A$ | | | | $15A$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $7A$ | $14A$ | $8I$ | $8J$ | $8K$ | $8L$ | $10D$ | $10E$ | $20A$ | $20B$ | $12M$ | $12N$ | $24A$ | $24B$ | $15A$ | $30A$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_3$ | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_4$ | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_6$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_8$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_9$ | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{10}$ | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{13}$ | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_{14}$ | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{18}$ | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{19}$ | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_{22}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{24}$ | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{25}$ | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{26}$ | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{29}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{30}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{32}$ | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{35}$ | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{36}$ | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{38}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{39}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{40}$ | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{41}$ | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{44}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $1A$ | | | | | | $2A$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $4A$ | $4B$ | $4C$ | $4D$ | $2H$ | $2I$ |
| $\chi_{67}$ | 28 | 28 | 4 | 4 | -4 | -4 | 16 | 16 | 4 | 4 | -4 | -4 | 0 | 0 |
| $\chi_{68}$ | 28 | 28 | 4 | 4 | -4 | -4 | -14 | -14 | -6 | -6 | 2 | 2 | 2 | 2 |
| $\chi_{69}$ | 28 | 28 | 4 | 4 | -4 | -4 | 14 | 14 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{70}$ | 28 | 28 | 4 | 4 | -4 | -4 | -16 | -16 | -4 | -4 | 4 | 4 | 0 | 0 |
| $\chi_{71}$ | 140 | 140 | 20 | 20 | -20 | -20 | -50 | -50 | -10 | -10 | 14 | 14 | -2 | -2 |
| $\chi_{72}$ | 140 | 140 | 20 | 20 | -20 | -20 | -20 | -20 | 0 | 0 | 8 | 8 | -4 | -4 |
| $\chi_{73}$ | 140 | 140 | 20 | 20 | -20 | -20 | 10 | 10 | 10 | 10 | 2 | 2 | -6 | -6 |
| $\chi_{74}$ | 140 | 140 | 20 | 20 | -20 | -20 | 40 | 40 | 20 | 20 | -4 | -4 | -8 | -8 |
| $\chi_{75}$ | 140 | 140 | 20 | 20 | -20 | -20 | -40 | -40 | -20 | -20 | 4 | 4 | 8 | 8 |
| $\chi_{76}$ | 140 | 140 | 20 | 20 | -20 | -20 | -10 | -10 | -10 | -10 | -2 | -2 | 6 | 6 |
| $\chi_{77}$ | 140 | 140 | 20 | 20 | -20 | -20 | 20 | 20 | 0 | 0 | -8 | -8 | 4 | 4 |
| $\chi_{78}$ | 140 | 140 | 20 | 20 | -20 | -20 | 50 | 50 | 10 | 10 | -14 | -14 | 2 | 2 |
| $\chi_{79}$ | 252 | 252 | 36 | 36 | -36 | -36 | 36 | 36 | 24 | 24 | 0 | 0 | -12 | -12 |
| $\chi_{80}$ | 252 | 252 | 36 | 36 | -36 | -36 | -54 | -54 | -6 | -6 | 18 | 18 | -6 | -6 |
| $\chi_{81}$ | 252 | 252 | 36 | 36 | -36 | -36 | 54 | 54 | 6 | 6 | -18 | -18 | 6 | 6 |
| $\chi_{82}$ | 252 | 252 | 36 | 36 | -36 | -36 | -36 | -36 | -24 | -24 | 0 | 0 | 12 | 12 |
| $\chi_{83}$ | 280 | 280 | 40 | 40 | -40 | -40 | -40 | -40 | 0 | 0 | 16 | 16 | -8 | -8 |
| $\chi_{84}$ | 280 | 280 | 40 | 40 | -40 | -40 | 20 | 20 | 20 | 20 | 4 | 4 | -12 | -12 |
| $\chi_{85}$ | 280 | 280 | 40 | 40 | -40 | -40 | -20 | -20 | -20 | -20 | -4 | -4 | 12 | 12 |
| $\chi_{86}$ | 280 | 280 | 40 | 40 | -40 | -40 | 40 | 40 | 0 | 0 | -16 | -16 | 8 | 8 |
| $\chi_{87}$ | 448 | 448 | 64 | 64 | -64 | -64 | -16 | -16 | 16 | 16 | 16 | 16 | -16 | -16 |
| $\chi_{88}$ | 448 | 448 | 64 | 64 | -64 | -64 | 16 | 16 | -16 | -16 | -16 | -16 | 16 | 16 |
| $\chi_{89}$ | 35 | -35 | -5 | 5 | -3 | 3 | 15 | -15 | -5 | 5 | -3 | 3 | 1 | -1 |
| $\chi_{90}$ | 35 | -35 | -5 | 5 | -3 | 3 | -15 | 15 | 5 | -5 | 3 | -3 | -1 | 1 |
| $\chi_{91}$ | 35 | -35 | -5 | 5 | -3 | 3 | -15 | 15 | 5 | -5 | 3 | -3 | -1 | 1 |
| $\chi_{92}$ | 35 | -35 | -5 | 5 | -3 | 3 | 15 | -15 | -5 | 5 | -3 | 3 | 1 | -1 |
| $\chi_{93}$ | 70 | -70 | -10 | 10 | -6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 140 | -140 | -20 | 20 | -12 | 12 | 30 | -30 | -10 | 10 | -6 | 6 | 2 | -2 |
| $\chi_{95}$ | 140 | -140 | -20 | 20 | -12 | 12 | -30 | 30 | 10 | -10 | 6 | -6 | -2 | 2 |
| $\chi_{96}$ | 140 | -140 | -20 | 20 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 140 | -140 | -20 | 20 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 210 | -210 | -30 | 30 | -18 | 18 | 60 | -60 | -20 | 20 | -12 | 12 | 4 | -4 |
| $\chi_{99}$ | 210 | -210 | -30 | 30 | -18 | 18 | 30 | -30 | -10 | 10 | -6 | 6 | 2 | -2 |
| $\chi_{100}$ | 210 | -210 | -30 | 30 | -18 | 18 | -30 | 30 | 10 | -10 | 6 | -6 | -2 | 2 |
| $\chi_{101}$ | 210 | -210 | -30 | 30 | -18 | 18 | -60 | 60 | 20 | -20 | 12 | -12 | -4 | 4 |
| $\chi_{102}$ | 315 | -315 | -45 | 45 | -27 | 27 | -45 | 45 | 15 | -15 | 9 | -9 | -3 | 3 |
| $\chi_{103}$ | 315 | -315 | -45 | 45 | -27 | 27 | -45 | 45 | 15 | -15 | 9 | -9 | -3 | 3 |
| $\chi_{104}$ | 315 | -315 | -45 | 45 | -27 | 27 | 45 | -45 | -15 | 15 | -9 | 9 | 3 | -3 |
| $\chi_{105}$ | 315 | -315 | -45 | 45 | -27 | 27 | 45 | -45 | -15 | 15 | -9 | 9 | 3 | -3 |
| $\chi_{106}$ | 420 | -420 | -60 | 60 | -36 | 36 | -30 | 30 | 10 | -10 | 6 | -6 | -2 | 2 |
| $\chi_{107}$ | 420 | -420 | -60 | 60 | -36 | 36 | 30 | -30 | -10 | 10 | -6 | 6 | 2 | -2 |
| $\chi_{108}$ | 630 | -630 | -90 | 90 | -54 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 35 | 35 | -5 | -5 | 3 | 3 | 15 | 15 | -5 | -5 | 3 | 3 | -1 | -1 |
| $\chi_{110}$ | 35 | 35 | -5 | -5 | 3 | 3 | -15 | -15 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{111}$ | 35 | 35 | -5 | -5 | 3 | 3 | -15 | -15 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{112}$ | 35 | 35 | -5 | -5 | 3 | 3 | 15 | 15 | -5 | -5 | 3 | 3 | -1 | -1 |
| $\chi_{113}$ | 70 | 70 | -10 | -10 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 140 | 140 | -20 | -20 | 12 | 12 | 30 | 30 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{115}$ | 140 | 140 | -20 | -20 | 12 | 12 | -30 | -30 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{116}$ | 140 | 140 | -20 | -20 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 140 | 140 | -20 | -20 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 210 | 210 | -30 | -30 | 18 | 18 | 60 | 60 | -20 | -20 | 12 | 12 | -4 | -4 |
| $\chi_{119}$ | 210 | 210 | -30 | -30 | 18 | 18 | 30 | 30 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{120}$ | 210 | 210 | -30 | -30 | 18 | 18 | -30 | -30 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{121}$ | 210 | 210 | -30 | -30 | 18 | 18 | -60 | -60 | 20 | 20 | -12 | -12 | 4 | 4 |
| $\chi_{122}$ | 315 | 315 | -45 | -45 | 27 | 27 | -45 | -45 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{123}$ | 315 | 315 | -45 | -45 | 27 | 27 | -45 | -45 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{124}$ | 315 | 315 | -45 | -45 | 27 | 27 | 45 | 45 | -15 | -15 | 9 | 9 | -3 | -3 |
| $\chi_{125}$ | 315 | 315 | -45 | -45 | 27 | 27 | 45 | 45 | -15 | -15 | 9 | 9 | -3 | -3 |
| $\chi_{126}$ | 420 | 420 | -60 | -60 | 36 | 36 | -30 | -30 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{127}$ | 420 | 420 | -60 | -60 | 36 | 36 | 30 | 30 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{128}$ | 630 | 630 | -90 | -90 | 54 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $2B$ | | | | | | | | $2C$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ | $2O$ | $4E$ | $4F$ | $2P$ | $2Q$ | $4G$ | $4H$ | $4I$ | $4J$ | $2R$ | $2S$ | $4K$ | $4L$ |
| $\chi_{67}$ | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{69}$ | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{70}$ | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{72}$ | -12 | -12 | -12 | -12 | 12 | 12 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 12 | 12 | 12 | 12 | -12 | -12 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{74}$ | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{75}$ | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{76}$ | 12 | 12 | 12 | 12 | -12 | -12 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{77}$ | -12 | -12 | -12 | -12 | 12 | 12 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{79}$ | -12 | -12 | -12 | -12 | 12 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{80}$ | 12 | 12 | 12 | 12 | -12 | -12 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{81}$ | 12 | 12 | 12 | 12 | -12 | -12 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{82}$ | -12 | -12 | -12 | -12 | 12 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{83}$ | -8 | -8 | -8 | -8 | 8 | 8 | 0 | 0 | -8 | -8 | -16 | -16 | 0 | 0 | 8 | 8 | 0 | 0 |
| $\chi_{84}$ | 8 | 8 | 8 | 8 | -8 | -8 | 0 | 0 | -16 | -16 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 8 | 8 | 8 | 8 | -8 | -8 | 0 | 0 | -16 | -16 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -8 | -8 | -8 | -8 | 8 | 8 | 0 | 0 | -8 | -8 | -16 | -16 | 0 | 0 | 8 | 8 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 11 | -11 | -5 | 5 | -3 | 3 | -1 | 1 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{90}$ | 11 | -11 | -5 | 5 | -3 | 3 | -1 | 1 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{91}$ | -5 | 5 | 11 | -11 | -3 | 3 | -1 | 1 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{92}$ | -5 | 5 | 11 | -11 | -3 | 3 | -1 | 1 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{93}$ | 6 | -6 | 6 | -6 | -6 | 6 | -2 | 2 | -10 | 10 | -14 | 14 | -2 | 2 | 6 | -6 | 2 | -2 |
| $\chi_{94}$ | 12 | -12 | 12 | -12 | -12 | 12 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{95}$ | 12 | -12 | 12 | -12 | -12 | 12 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{96}$ | 28 | -28 | -4 | 4 | -12 | 12 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{97}$ | -4 | 4 | 28 | -28 | -12 | 12 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{98}$ | -6 | 6 | -6 | 6 | 6 | -6 | 2 | -2 | 14 | -14 | 10 | -10 | 6 | -6 | -2 | 2 | 2 | -2 |
| $\chi_{99}$ | -6 | 6 | -6 | 6 | 6 | -6 | 2 | -2 | -10 | 10 | -14 | 14 | -2 | 2 | 6 | -6 | 2 | -2 |
| $\chi_{100}$ | -6 | 6 | -6 | 6 | 6 | -6 | 2 | -2 | -10 | 10 | -14 | 14 | -2 | 2 | 6 | -6 | 2 | -2 |
| $\chi_{101}$ | -6 | 6 | -6 | 6 | 6 | -6 | 2 | -2 | 14 | -14 | 10 | -10 | 6 | -6 | -2 | 2 | 2 | -2 |
| $\chi_{102}$ | 27 | -27 | -21 | 21 | -3 | 3 | -1 | 1 | 3 | -3 | 9 | -9 | -1 | 1 | -5 | 5 | -3 | 3 |
| $\chi_{103}$ | -21 | 21 | 27 | -27 | -3 | 3 | -1 | 1 | 3 | -3 | 9 | -9 | -1 | 1 | -5 | 5 | -3 | 3 |
| $\chi_{104}$ | 27 | -27 | -21 | 21 | -3 | 3 | -1 | 1 | 3 | -3 | 9 | -9 | -1 | 1 | -5 | 5 | -3 | 3 |
| $\chi_{105}$ | -21 | 21 | 27 | -27 | -3 | 3 | -1 | 1 | 3 | -3 | 9 | -9 | -1 | 1 | -5 | 5 | -3 | 3 |
| $\chi_{106}$ | -12 | 12 | -12 | 12 | 12 | -12 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{107}$ | -12 | 12 | -12 | 12 | 12 | -12 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{108}$ | 6 | -6 | 6 | -6 | -6 | 6 | -2 | 2 | -18 | 18 | -6 | 6 | -10 | 10 | -2 | 2 | -6 | 6 |
| $\chi_{109}$ | 11 | 11 | -5 | -5 | 3 | 3 | -1 | -1 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{110}$ | 11 | 11 | -5 | -5 | 3 | 3 | -1 | -1 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{111}$ | -5 | -5 | 11 | 11 | 3 | 3 | -1 | -1 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{112}$ | -5 | -5 | 11 | 11 | 3 | 3 | -1 | -1 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{113}$ | 6 | 6 | 6 | 6 | 6 | 6 | -2 | -2 | -10 | -10 | 14 | 14 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{114}$ | 12 | 12 | 12 | 12 | 12 | 12 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{115}$ | 12 | 12 | 12 | 12 | 12 | 12 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{116}$ | 28 | 28 | -4 | -4 | 12 | 12 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{117}$ | -4 | -4 | 28 | 28 | 12 | 12 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{118}$ | -6 | -6 | -6 | -6 | -6 | -6 | 2 | 2 | 14 | 14 | -10 | -10 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{119}$ | -6 | -6 | -6 | -6 | -6 | -6 | 2 | 2 | -10 | -10 | 14 | 14 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{120}$ | -6 | -6 | -6 | -6 | -6 | -6 | 2 | 2 | -10 | -10 | 14 | 14 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{121}$ | -6 | -6 | -6 | -6 | -6 | -6 | 2 | 2 | 14 | 14 | -10 | -10 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{122}$ | 27 | 27 | -21 | -21 | 3 | 3 | -1 | -1 | 3 | 3 | -9 | -9 | -1 | -1 | -5 | -5 | 3 | 3 |
| $\chi_{123}$ | -21 | -21 | 27 | 27 | 3 | 3 | -1 | -1 | 3 | 3 | -9 | -9 | -1 | -1 | -5 | -5 | 3 | 3 |
| $\chi_{124}$ | 27 | 27 | -21 | -21 | 3 | 3 | -1 | -1 | 3 | 3 | -9 | -9 | -1 | -1 | -5 | -5 | 3 | 3 |
| $\chi_{125}$ | -21 | -21 | 27 | 27 | 3 | 3 | -1 | -1 | 3 | 3 | -9 | -9 | -1 | -1 | -5 | -5 | 3 | 3 |
| $\chi_{126}$ | -12 | -12 | -12 | -12 | -12 | -12 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{127}$ | -12 | -12 | -12 | -12 | -12 | -12 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{128}$ | 6 | 6 | 6 | 6 | 6 | 6 | -2 | -2 | -18 | -18 | 6 | 6 | -10 | -10 | -2 | -2 | 6 | 6 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $2D$ | | | | | | | | $3A$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2T$ | $2U$ | $4M$ | $4N$ | $4O$ | $4P$ | $4Q$ | $4R$ | $3A$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ |
| $\chi_{67}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{68}$ | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{69}$ | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{70}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{71}$ | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 20 | 20 | 4 | 4 | -4 | -4 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | -10 | -10 | -2 | -2 | 2 | 2 |
| $\chi_{73}$ | -6 | -6 | 6 | 6 | -2 | 2 | 2 | -2 | -10 | -10 | -2 | -2 | 2 | 2 |
| $\chi_{74}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 20 | 20 | 4 | 4 | -4 | -4 |
| $\chi_{75}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 20 | 20 | 4 | 4 | -4 | -4 |
| $\chi_{76}$ | 6 | 6 | -6 | -6 | 2 | -2 | -2 | 2 | -10 | -10 | -2 | -2 | 2 | 2 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | -10 | -10 | -2 | -2 | 2 | 2 |
| $\chi_{78}$ | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 20 | 20 | 4 | 4 | -4 | -4 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | -6 | -6 | 6 | 6 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 6 | 6 | -6 | -6 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{84}$ | 4 | 4 | -4 | -4 | -4 | 4 | 4 | -4 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{85}$ | -4 | -4 | 4 | 4 | 4 | -4 | -4 | 4 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{86}$ | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 | 10 | 10 | 2 | 2 | -2 | -2 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -20 | -20 | -4 | -4 | 4 | 4 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -20 | -20 | -4 | -4 | 4 | 4 |
| $\chi_{89}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 5 | -5 | -3 | 3 | -1 | 1 |
| $\chi_{90}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 5 | -5 | -3 | 3 | -1 | 1 |
| $\chi_{91}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 5 | -5 | -3 | 3 | -1 | 1 |
| $\chi_{92}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 5 | -5 | -3 | 3 | -1 | 1 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | -10 | -6 | 6 | -2 | 2 |
| $\chi_{94}$ | 6 | -6 | 6 | -6 | -2 | -2 | 2 | 2 | 5 | -5 | -3 | 3 | -1 | 1 |
| $\chi_{95}$ | -6 | 6 | -6 | 6 | 2 | 2 | -2 | -2 | 5 | -5 | -3 | 3 | -1 | 1 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10 | 10 | 6 | -6 | 2 | -2 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10 | 10 | 6 | -6 | 2 | -2 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | -15 | -9 | 9 | -3 | 3 |
| $\chi_{99}$ | -6 | 6 | -6 | 6 | 2 | 2 | -2 | -2 | 15 | -15 | -9 | 9 | -3 | 3 |
| $\chi_{100}$ | 6 | -6 | 6 | -6 | -2 | -2 | 2 | 2 | 15 | -15 | -9 | 9 | -3 | 3 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | -15 | -9 | 9 | -3 | 3 |
| $\chi_{102}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | -6 | 6 | -6 | 6 | 2 | 2 | -2 | -2 | -15 | 15 | 9 | -9 | 3 | -3 |
| $\chi_{107}$ | 6 | -6 | 6 | -6 | -2 | -2 | 2 | 2 | -15 | 15 | 9 | -9 | 3 | -3 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{110}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{111}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{112}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{114}$ | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{115}$ | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{119}$ | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{120}$ | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{122}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | -15 | -15 | 9 | 9 | -3 | -3 |
| $\chi_{127}$ | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 | -15 | -15 | 9 | 9 | -3 | -3 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | 3B | | | | | | 4A | | | | | | 4B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3B | 6F | 6G | 6H | 6I | 6J | 4S | 4T | 4U | 4V | 8A | 8B | 4W | 4X | 4Y | 4Z | 4AA | 4AB |
| χ67 | 1 | 1 | 1 | 1 | -1 | -1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ68 | 1 | 1 | 1 | 1 | -1 | -1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ69 | 1 | 1 | 1 | 1 | -1 | -1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ70 | 1 | 1 | 1 | 1 | -1 | -1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ71 | -1 | -1 | -1 | -1 | 1 | 1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ72 | 2 | 2 | 2 | 2 | -2 | -2 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ73 | 2 | 2 | 2 | 2 | -2 | -2 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ74 | -1 | -1 | -1 | -1 | 1 | 1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ75 | -1 | -1 | -1 | -1 | 1 | 1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ76 | 2 | 2 | 2 | 2 | -2 | -2 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ77 | 2 | 2 | 2 | 2 | -2 | -2 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ78 | -1 | -1 | -1 | -1 | 1 | 1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ79 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ80 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ81 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ82 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ83 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ84 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ85 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ86 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ87 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ88 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ89 | 2 | -2 | -2 | 2 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | 3 | -3 | -1 | 1 | -1 | 1 |
| χ90 | 2 | -2 | -2 | 2 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | -3 | -1 | 1 | -1 | 1 |
| χ91 | 2 | -2 | -2 | 2 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 3 | -3 | -1 | 1 |
| χ92 | 2 | -2 | -2 | 2 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 3 | -3 | -1 | 1 |
| χ93 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 |
| χ94 | -4 | 4 | 4 | -4 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ95 | -4 | 4 | 4 | -4 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ96 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| χ97 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 |
| χ98 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 |
| χ99 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 2 | -2 | 2 | -2 | -2 | 2 |
| χ100 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 4 | -4 | 2 | -2 | 2 | -2 | -2 | 2 |
| χ101 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 |
| χ102 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 | 3 | -3 | -1 | 1 |
| χ103 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | -1 | 1 | -1 | 1 |
| χ104 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | 3 | -3 | -1 | 1 | 3 | -3 | -1 | 1 |
| χ105 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | 3 | -3 | 3 | -3 | -1 | 1 | -1 | 1 |
| χ106 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ107 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 |
| χ109 | 2 | 2 | -2 | -2 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 3 | 3 | -1 | -1 | -1 | -1 |
| χ110 | 2 | 2 | -2 | -2 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 3 | 3 | -1 | -1 | -1 | -1 |
| χ111 | 2 | 2 | -2 | -2 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 3 | 3 | -1 | -1 |
| χ112 | 2 | 2 | -2 | -2 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 3 | 3 | -1 | -1 |
| χ113 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 |
| χ114 | -4 | -4 | 4 | 4 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ115 | -4 | -4 | 4 | 4 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ116 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 |
| χ117 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 |
| χ118 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| χ119 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | -4 | -4 | 2 | 2 | 2 | 2 | -2 | -2 |
| χ120 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | 4 | 4 | 2 | 2 | 2 | 2 | -2 | -2 |
| χ121 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| χ122 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 | 3 | 3 | -1 | -1 |
| χ123 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -1 | -1 | -1 | -1 |
| χ124 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | 3 | 3 | -1 | -1 | 3 | 3 | -1 | -1 |
| χ125 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 |
| χ126 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ127 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| χ128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $4C$ | | | | | | | | $4D$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $4AG$ | $4AH$ | $8C$ | $8D$ | $4AI$ | $4AJ$ | $4AK$ | $4AL$ | $8E$ | $8F$ | $8G$ | $8H$ |
| $\chi_{67}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{68}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{69}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{70}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{71}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{72}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{73}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{74}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{75}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{76}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{77}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{78}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{79}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{80}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{81}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{82}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 5 | -5 | 3 | -3 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{90}$ | -5 | 5 | -3 | 3 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{91}$ | 3 | -3 | 5 | -5 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{92}$ | -3 | 3 | -5 | 5 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{94}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | -5 | 5 | -3 | 3 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{103}$ | 3 | -3 | 5 | -5 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{104}$ | 5 | -5 | 3 | -3 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{105}$ | -3 | 3 | -5 | 5 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{106}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{109}$ | 5 | 5 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{110}$ | -5 | -5 | 3 | 3 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{111}$ | 3 | 3 | -5 | -5 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{112}$ | -3 | -3 | 5 | 5 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{114}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | -5 | -5 | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{123}$ | 3 | 3 | -5 | -5 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{124}$ | 5 | 5 | -3 | -3 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{125}$ | -3 | -3 | 5 | 5 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{126}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $5A$ | | | | $6A$ | | | | $6B$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $5A$ | $10A$ | $10B$ | $10C$ | $6K$ | $6L$ | $12A$ | $12B$ | $6M$ | $6N$ | $12C$ | $12D$ | $12E$ | $12F$ | $6O$ | $6P$ |
| $\chi_{67}$ | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | 4 | 4 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{68}$ | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | -2 | -2 | -4 | -4 | 0 | 0 | 2 | 2 |
| $\chi_{69}$ | 3 | 3 | -1 | -1 | -1 | -1 | 1 | 1 | 2 | 2 | 4 | 4 | 0 | 0 | -2 | -2 |
| $\chi_{70}$ | 3 | 3 | -1 | -1 | -1 | -1 | 1 | 1 | -4 | -4 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | -2 | -2 | -4 | -4 | 0 | 0 | 2 | 2 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 4 | 4 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -4 | -4 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | 4 | 4 | 0 | 0 | -2 | -2 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{79}$ | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 2 | 2 | 4 | 4 | 0 | 0 | -2 | -2 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -4 | -4 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 4 | 4 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -2 | -2 | -4 | -4 | 0 | 0 | 2 | 2 |
| $\chi_{87}$ | 3 | 3 | -1 | -1 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{88}$ | 3 | 3 | -1 | -1 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $6C$ | | | | | | $6D$ | | | | $6E$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6Q$ | $6R$ | $12G$ | $12H$ | $12I$ | $12J$ | $6S$ | $6T$ | $12K$ | $12L$ | $6U$ | $6V$ | $6W$ | $6X$ | $6Y$ | $6Z$ |
| $\chi_{67}$ | 2 | 2 | -2 | -2 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{68}$ | -2 | -2 | 2 | 2 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{69}$ | -2 | -2 | 2 | 2 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{70}$ | 2 | 2 | -2 | -2 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{72}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{76}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | -2 | -2 | 2 | 2 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{84}$ | 2 | 2 | -2 | -2 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{85}$ | 2 | 2 | -2 | -2 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{86}$ | -2 | -2 | 2 | 2 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{90}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{91}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{92}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{93}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{97}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{98}$ | -1 | 1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -1 | 1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -1 | 1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -1 | 1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{110}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{111}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{112}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{113}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{117}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{118}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.7: Character table of $G = 2^7 : S_8$(continued)

| | $7A$ | | $8A$ | | | | $10A$ | | | | $12A$ | | | | $15A$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $7A$ | $14A$ | $8I$ | $8J$ | $8K$ | $8L$ | $10D$ | $10E$ | $20A$ | $20B$ | $12M$ | $12N$ | $24A$ | $24B$ | $15A$ | $30A$ |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{112}$ | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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### 7.1.6 The Fusion of $2^7 : S_8$ into $2^7 : Sp_6(2)$

We use the results of Subsection 7.1.1 to compute the power maps of the elements of $2^7 : S_8$ which are listed in Table 7.8 below.

Table 7.8: The power maps of the elements of $2^7 : S_8$

| $[x]_{S_8}$ | $[q]_{2^7:S_8}$ | 2 | 3 | 5 | 7 | $[q]_{S_8}$ | $[x]_{2^7:S_8}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | | | | $2A$ | $2F$ | $1A$ | | | |
| | $2A$ | $1A$ | | | | | $2G$ | $1A$ | | | |
| | $2B$ | $1A$ | | | | | $4A$ | $2B$ | | | |
| | $2C$ | $1A$ | | | | | $4B$ | $2B$ | | | |
| | $2D$ | $1A$ | | | | | $4C$ | $2B$ | | | |
| | $2E$ | $1A$ | | | | | $4D$ | $2B$ | | | |
| | | | | | | | $2H$ | $1A$ | | | |
| | | | | | | | $2I$ | $1A$ | | | |
| $2B$ | $2J$ | $1A$ | | | | $2C$ | $2P$ | $1A$ | | | |
| | $2K$ | $1A$ | | | | | $2Q$ | $1A$ | | | |
| | $2L$ | $1A$ | | | | | $4G$ | $2E$ | | | |
| | $2M$ | $1A$ | | | | | $4H$ | $2E$ | | | |
| | $2N$ | $1A$ | | | | | $4I$ | $2E$ | | | |
| | $2O$ | $1A$ | | | | | $4J$ | $2E$ | | | |
| | $4E$ | $2E$ | | | | | $2R$ | $1A$ | | | |
| | $4F$ | $2E$ | | | | | $2S$ | $1A$ | | | |
| | | | | | | | $4K$ | $2B$ | | | |
| | | | | | | | $4L$ | $2B$ | | | |
| $2D$ | $2T$ | $1A$ | | | | $3A$ | $3A$ | | $1A$ | | |
| | $2U$ | $1A$ | | | | | $6A$ | $3A$ | $2A$ | | |
| | $4M$ | $2B$ | | | | | $6B$ | $3A$ | $2E$ | | |
| | $4N$ | $2B$ | | | | | $6C$ | $3A$ | $2D$ | | |
| | $4O$ | $2E$ | | | | | $6D$ | $3A$ | $2C$ | | |
| | $4P$ | $2B$ | | | | | $6E$ | $3A$ | $2B$ | | |
| | $4Q$ | $2B$ | | | | | | | | | |
| | $4R$ | $2E$ | | | | | | | | | |
| $3B$ | $3B$ | | $1A$ | | | $4A$ | $4R$ | $2P$ | | | |
| | $6F$ | $3B$ | $2A$ | | | | $4S$ | $2P$ | | | |
| | $6G$ | $3B$ | $2B$ | | | | $4T$ | $2P$ | | | |
| | $6H$ | $3B$ | $2C$ | | | | $4U$ | $2P$ | | | |
| | $6I$ | $3B$ | $2D$ | | | | $8A$ | $4H$ | | | |
| | $6J$ | $3B$ | $2E$ | | | | $8B$ | $4H$ | | | |
| $4B$ | $4V$ | $2J$ | | | | $4C$ | $4AB$ | $2P$ | | | |
| | $4W$ | $2J$ | | | | | $4AC$ | $2P$ | | | |
| | $4X$ | $2L$ | | | | | $4AD$ | $2P$ | | | |
| | $4Y$ | $2L$ | | | | | $4AE$ | $2P$ | | | |
| | $4Z$ | $2O$ | | | | | $4AF$ | $2P$ | | | |
| | $4AA$ | $2O$ | | | | | $4AG$ | $2P$ | | | |
| | | | | | | | $8C$ | $4J$ | | | |
| | | | | | | | $8D$ | $4J$ | | | |
| $4D$ | $4AH$ | $2P$ | | | | $5A$ | $5A$ | | | $1A$ | |
| | $4AI$ | $2P$ | | | | | $10A$ | $5A$ | | $2A$ | |
| | $4AJ$ | $2R$ | | | | | $10B$ | $5A$ | | $2B$ | |
| | $4AK$ | $2R$ | | | | | $10C$ | $5A$ | | $2C$ | |
| | $8E$ | $4J$ | | | | | | | | | |
| | $8F$ | $4J$ | | | | | | | | | |
| | $8G$ | $4G$ | | | | | | | | | |
| | $8H$ | $4G$ | | | | | | | | | |
| $6A$ | $6K$ | $3B$ | $2F$ | | | $6B$ | $6M$ | $3A$ | $2F$ | | |
| | $6L$ | $3B$ | $2G$ | | | | $6N$ | $3A$ | $2G$ | | |
| | $12A$ | $6G$ | $4D$ | | | | $12C$ | $6E$ | $4C$ | | |
| | $12B$ | $6G$ | $4C$ | | | | $12D$ | $6E$ | $4D$ | | |
| | | | | | | | $12E$ | $6E$ | $4A$ | | |
| | | | | | | | $12F$ | $6E$ | $4B$ | | |
| | | | | | | | $6O$ | $3A$ | $2H$ | | |
| | | | | | | | $6P$ | $3A$ | $2I$ | | |

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Table 7.8 : The power maps of the elements of $2^7 : S_8$ (continued)

| $[q]_{S_8}$ | $[x]_{2^7:S_8}$ | 2 | 3 | 5 | 7 | $[q]_{S_8}$ | $[x]_{2^7:S_8}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $6C$ | $6Q$ | $3A$ | $2P$ | | | $6D$ | $6S$ | $3B$ | $2T$ | | |
| | $6R$ | $3A$ | $2Q$ | | | | $6T$ | $3B$ | $2U$ | | |
| | $12G$ | $6B$ | $4G$ | | | | $12K$ | $6G$ | $4N$ | | |
| | $12H$ | $6B$ | $4H$ | | | | $12L$ | $6G$ | $4M$ | | |
| | $12I$ | $6B$ | $4K$ | | | | | | | | |
| | $12J$ | $6B$ | $4L$ | | | | | | | | |
| $6E$ | $6U$ | $3B$ | $2J$ | | | $7A$ | $7A$ | | | | $1A$ |
| | $6V$ | $3B$ | $2L$ | | | | $14A$ | $7A$ | | | $2A$ |
| | $6W$ | $3B$ | $2M$ | | | | | | | | |
| | $6X$ | $3B$ | $2K$ | | | | | | | | |
| | $6Y$ | $3B$ | $2N$ | | | | | | | | |
| | $6Z$ | $3B$ | $2O$ | | | | | | | | |
| $8A$ | $8I$ | $4V$ | | | | $10A$ | $10D$ | $5A$ | | $2F$ | |
| | $8J$ | $4V$ | | | | | $10E$ | $5A$ | | $2G$ | |
| | $8K$ | $4X$ | | | | | $20A$ | $10B$ | | $4A$ | |
| | $8L$ | $4X$ | | | | | $20B$ | $10B$ | | $4B$ | |
| $12A$ | $12M$ | $6Q$ | $4S$ | | | $15A$ | $15A$ | | $5A$ | $3A$ | |
| | $12N$ | $6Q$ | $4T$ | | | | $30A$ | | $15A$ | $6A$ | |
| | $24A$ | $12H$ | $8A$ | | | | | | | | |
| | $24B$ | $12H$ | $8B$ | | | | | | | | |

Let $\chi(2^7 : Sp_6(2)|2^7 : S_8)$ be the permutation character of degree 36 of $2^7 : Sp_6(2)$ acting on $2^7 : S_8$. We obtain that $\chi(2^7 : S_8|2^7 : Sp_6(2)) = 1a + 35b$. We are able to obtain the partial fusion of $2^7 : S_8$ into $2^7 : Sp_6(2)$ by using the information provided by the conjugacy classes of the elements of $2^7 : S_8$ and $2^7 : Sp_6(2)$ , their power maps , together with the permutation character of $2^7 : Sp_6(2)$ of degree 36 and the fusion map of $S_8$ into $Sp_6(2)$. We used the technique of set intersections for characters to restrict $63a$, $63b$ , $36a$ , $36b$, $28a$ , $28b \in Irr(2^7 : Sp_6(2))$ to $2^7 : S_8$ to determine fully the fusion of the classes of $2^7 : S_8$ into $2^7 : Sp_6(2)$ . We refer the reader for detailed information regarding the above set intersections technique to Moori [31], Mpono [35], Moori and Mpono [34], Ali [1] and Moori and Ali [2].

Let $\zeta$ be the character afforded by the regular representation of $S_8$. We obtain that $\zeta = \Sigma_{i=1}^{22} \alpha_i \Phi_i$, where $\Phi_i \in Irr(S_8)$ and $\alpha_i = deg(\Phi_i)$.Then $\zeta$ can be regarded as a character of $2^7 : S_8$ which contains $2^7$ in its kernel such that

$$\zeta(x) = \begin{cases} |S_8| & \text{if } x \in 2^7 \\ 0 & \text{otherwise} \end{cases}$$

If $\phi$ is a character of $2^7 : Sp_6(2)$ than we have that

$$\begin{aligned} < \zeta, \phi >_{2^7:S_8} = & \frac{1}{|2^7 : S_8|}\{\zeta(1A)\phi(1A) + \zeta(2A)\phi(2A) + 28\zeta(2B)\phi(2B) + 28\zeta(2C)\phi(2C) + \\ & 35\zeta(2D)\phi(2D) + 35\zeta(2E)\phi(2E)\} \\ = & \frac{1}{|2^7 : S_8|}\{|S_8|(\phi(1A) + \phi(2A) + 28\phi(2B) + 28\phi(2C) + 35\phi(2D) + 35\phi(2E))\} \\ = & \frac{1}{128}\{\phi(1A) + \phi(2A) + 28\phi(2B) + 28\phi(2C) + 35\phi(2D) + 35\phi(2E)\} \\ = & < \phi \downarrow 2^7, 1_{2^7} > \end{aligned}$$

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Here $1_{2^7}$ is the identity character of $2^7$ and $\phi \downarrow 2^7$ is the restriction of $\phi$ to $2^7$.We obtain that

$$\phi \downarrow 2^7 = a_1\theta_1 + a_2\theta_2 + a_3\theta_3 + a_4\theta_4 + a_5\theta_5 + a_6\theta_6,$$

where $a_i \in \mathbb{N} \cup 0$ and $\theta_i$ are the sums of the irreducible characters of $2^7$ which are in the same orbit under the action of $S_8$ on $Irr(2^7)$, for $i \in \{1, 2, 3, 4\}$. Let $\varphi_j \in Irr(2^7)$ , where $j \in \{1, 2, 3, ..., 128\}$. Then we obtain that

$$\begin{aligned}
\theta_1 &= \varphi_1 \quad , \quad deg(\theta_1) = 1 \\
\theta_2 &= \varphi_2 \quad , \quad deg(\theta_2) = 1 \\
\theta_3 &= \sum_{j=3}^{30} \varphi_j \ , \quad deg(\theta_3) = 28 \\
\theta_4 &= \sum_{j=31}^{58} \varphi_j \ , \quad deg(\theta_4) = 28 \\
\theta_5 &= \sum_{j=59}^{93} \varphi_j \ , \quad deg(\theta_5) = 35 \\
\theta_6 &= \sum_{j=94}^{128} \varphi_j \ , \quad deg(\theta_6) = 35
\end{aligned}$$

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Hence

$$\phi \downarrow 2^7 = a_1\varphi_1 + a_2\varphi_2 + a_3\sum_{j=3}^{30}\varphi_j + a_4\sum_{j=31}^{58} + a_5\sum_{j=59}^{93}\varphi_j + a_6\sum_{j=94}^{128}\varphi_j,$$

and therefore

$\langle \phi \downarrow 2^7, \phi \downarrow 2^7 \rangle = a_1^2 + a_2^2 + 28a_3^2 + 28a_4^2 + 35a_5^2 + 35a_5^2$

$= \frac{1}{128}\{\phi(1A)\phi(1A) + \phi(2A)\phi(2A) + 28\phi(2B)\phi(2B) + 28\phi(2C)\phi(2C) + 35\phi(2D)\phi(2D) + 35\phi(2E)\phi(2E)\}$, where $a_1 = < \zeta, \phi >_{2^7:S_8}$

We apply the above results to some of the irreducible characters of $2^7 : Sp_6(2)$, which in this case are $\phi_1 = 28a$, $\phi_2 = 28b$, $\phi_3 = 36a$, $\phi_4 = 36b$, $\phi_5 = 63a$ and $\phi_6 = 63b$ . Their respective degrees are 28, 28, 36, 36, 63 and 63. For $\phi_3$ we calculate that

$$< \phi \downarrow 2^7, 1_{2^7} >= \frac{1}{128}\{\phi(36) + \phi(-36) + 28\phi(-4) + 28\phi(4) + 35\phi(-4) + 35\phi(4)\} = 0$$

Now $a_1 + a_2 + 28a_3 + 28a_4 + 35a_5 + 35a_6 = 36$ , since $deg\phi_3 = 36$. Since $a_1 = 0$ , we must have either $a_2 = 1$ , $a_3 = a_4 = a_5 = 0$ and $a_6 = 1$ or $a_2 = 1$ , $a_3 = a_4 = a_6 = 0$ and $a_5 = 1$. Note that $2^7 : S_8$ does not have irreducible characters of degree 36 or 8. We obtain that $(\phi_3) \downarrow 2^7 : S_8 = \chi_{23} + \chi_{89}$ if the partial fusion of $2^7 : S_8$ into $2^7 : Sp_6(2)$ is taken into consideration. Similarly for $\phi_1$, $\phi_2$, $\phi_4$, $\phi_5$ and $\phi_6$ we obtain that

$$(\phi_1) \downarrow 2^7 : S_8 = \chi_{45}$$
$$(\phi_2) \downarrow 2^7 : S_8 = \chi_{48}$$
$$(\phi_4) \downarrow 2^7 : S_8 = \chi_{24} + \chi_{90}$$
$$(\phi_5) \downarrow 2^7 : S_8 = \chi_{67} + \chi_{109}$$
$$(\phi_6) \downarrow 2^7 : S_8 = \chi_{68} + \chi_{111}$$

By making use of the values of $\phi_1$, $\phi_2$, $\phi_3$, $\phi_4$, $\phi_5$ and $\phi_6$ on the classes of $2^7 : Sp_6(2)$ and the values of $(\phi_1) \downarrow 2^7 : S_8$, $(\phi_2) \downarrow 2^7 : S_8$, $(\phi_3) \downarrow 2^7 : S_8$, $(\phi_4) \downarrow 2^7 : S_8$, $(\phi_5) \downarrow 2^7 : S_8$ and $(\phi_6) \downarrow 2^7 : S_8$ on the classes of $2^7 : S_8$ together with the partial fusion , the complete fusion map of $2^7 : S_8$ into $2^7 : Sp_6(2)$ is given in the Table 7.9.

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Table 7.9: The fusion of $2^7 : S_8$ into $2^7 : Sp_6(2)$

| $[q]_{S_8}$ | $[g]_{2^7:S_8}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{S_8}$ | $[g]_{2^7:S_8}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | $1A$ | $2A$ | $2F$ | | $2D$ |
| | $2A$ | | $2A$ | | $2G$ | | $2E$ |
| | $2B$ | | $2C$ | | $4A$ | | $4A$ |
| | $2C$ | | $2B$ | | $4B$ | | $4B$ |
| | $2D$ | | $2C$ | | $4C$ | | $4A$ |
| | $2E$ | | $2B$ | | $4D$ | | $4B$ |
| | | | | | $2H$ | | $2F$ |
| | | | | | $2I$ | | $2F$ |
| $2B$ | $2J$ | | $2G$ | $2C$ | $2P$ | | $2K$ |
| | $2K$ | | $2H$ | | $2Q$ | | $2L$ |
| | $2L$ | | $2I$ | | $4G$ | | $4E$ |
| | $2M$ | | $2J$ | | $4H$ | | $4D$ |
| | $2N$ | | $2I$ | | $4I$ | | $4E$ |
| | $2O$ | | $2J$ | | $4J$ | | $4D$ |
| | $4E$ | | $4C$ | | $2R$ | | $2M$ |
| | $4F$ | | $4C$ | | $2S$ | | $2M$ |
| | | | | | $4K$ | | $4F$ |
| | | | | | $4L$ | | $4F$ |
| $2D$ | $2T$ | | $2N$ | $3A$ | $3A$ | | $3A$ |
| | $2U$ | | $2O$ | | $6A$ | | $6A$ |
| | $4M$ | | $4G$ | | $6B$ | | $6B$ |
| | $4N$ | | $4H$ | | $6C$ | | $6C$ |
| | $4O$ | | $4I$ | | $6D$ | | $6B$ |
| | $4P$ | | $4J$ | | $6E$ | | $6C$ |
| | $4Q$ | | $4J$ | | | | |
| | $4R$ | | $4I$ | | | | |
| $3B$ | $3B$ | | $3C$ | $4A$ | $4S$ | | $4N$ |
| | $6F$ | | $6E$ | | $4T$ | | $4O$ |
| | $6G$ | | $6G$ | | $4U$ | | $4P$ |
| | $6H$ | | $6F$ | | $4V$ | | $4Q$ |
| | $6I$ | | $6G$ | | $8A$ | | $8A$ |
| | $6J$ | | $6F$ | | $8B$ | | $8A$ |
| $4B$ | $4W$ | | $4V$ | $4C$ | $4AC$ | | $4R$ |
| | $4X$ | | $4W$ | | $4AD$ | | $4S$ |
| | $4Y$ | | $4X$ | | $4AE$ | | $4T$ |
| | $4Z$ | | $4X$ | | $4AF$ | | $4U$ |
| | $4AA$ | | $4Y$ | | $4AG$ | | $4T$ |
| | $4AB$ | | $4Y$ | | $4AH$ | | $4U$ |
| | | | | | $8C$ | | $8B$ |
| | | | | | $8D$ | | $8B$ |
| $4D$ | $4AI$ | | $4Z$ | $5A$ | $5A$ | | $5A$ |
| | $4AJ$ | | $4AA$ | | $10A$ | | $10A$ |
| | $4AK$ | | $4AB$ | | $10B$ | | $10B$ |
| | $4AL$ | | $4AC$ | | $10C$ | | $10C$ |
| | $8E$ | | $8C$ | | | | |
| | $8F$ | | $8C$ | | | | |
| | $8G$ | | $8D$ | | | | |
| | $8H$ | | $8D$ | | | | |
| $6A$ | $6K$ | | $6U$ | $6B$ | $6M$ | | $6H$ |
| | $6L$ | | $6V$ | | $6N$ | | $6I$ |
| | $12A$ | | $12G$ | | $12C$ | | $12A$ |
| | $12B$ | | $12H$ | | $12D$ | | $12B$ |
| | | | | | $12E$ | | $12A$ |
| | | | | | $12F$ | | $12B$ |
| | | | | | $6O$ | | $6J$ |
| | | | | | $6P$ | | $6J$ |
| $6C$ | $6Q$ | | $6O$ | $6D$ | $6S$ | | $6W$ |
| | $6R$ | | $6P$ | | $6T$ | | $6X$ |
| | $12G$ | | $12E$ | | $12K$ | | $12J$ |
| | $12H$ | | $12D$ | | $12L$ | | $12I$ |
| | $12I$ | | $12F$ | | | | |
| | $12J$ | | $12F$ | | | | |

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Table 7.9 : The fusion of $2^7 : S_8$ into $2^7 : Sp_6(2)$ (continued)

| $[q]_{S_8}$ | $[g]_{2^7:S_8}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{S_8}$ | $[g]_{2^7:S_8}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $6E$ | $6U$ | | $6Q$ | $7A$ | $7A$ | | $7A$ |
| | $6V$ | | $6T$ | | $14A$ | | $14A$ |
| | $6W$ | | $6S$ | | | | |
| | $6X$ | | $6R$ | | | | |
| | $6Y$ | | $6T$ | | | | |
| | $6Z$ | | $6S$ | | | | |
| $8A$ | $8I$ | | $8E$ | $10A$ | $10D$ | | $10D$ |
| | $8J$ | | $8F$ | | $10E$ | | $10E$ |
| | $8K$ | | $8G$ | | $20A$ | | $20A$ |
| | $8L$ | | $8G$ | | $20B$ | | $20B$ |
| $12A$ | $12M$ | | $12K$ | $15A$ | $15A$ | | $15A$ |
| | $12N$ | | $12L$ | | $30A$ | | $30A$ |
| | $24A$ | | $24A$ | | | | |
| | $24B$ | | $24A$ | | | | |

## 7.2 The group $2^7 : O_6^-(2)$

Let $G = H_3 = 2^7 : O_6^-(2)$ be the split extension of $K = 2^7$ by $Q = O_6^-(2)$ , where $K$ is the vector space of dimension 7 over $GF(2)$ on which $Q$ acts.

### 7.2.1 The conjugacy classes of $2^7 : O_6^-(2)$

In this section we use the method of coset analysis discussed in Chapter 3, to determine the conjugacy classes of elements of $2^7 : O_6^-(2)$. We generated $O_6^-(2$ by two elements $q1 \in 4A$ and $q2 \in 6A$ of $Sp_6(2)$. Ali[1] constructed $Sp_6(2)$ in terms of $7 \times 7$ matrices over $GF(2)$. Here $4A$ and $6A$ are conjugacy classes of elements of $Sp_6(2)$ and $q1$ and $q2$ are given by :

$$q1=\begin{pmatrix} 1&1&1&1&1&1&1\\ 0&0&1&1&1&1&1\\ 0&1&1&1&0&0&1\\ 0&1&1&0&1&1&0\\ 0&0&0&0&1&0&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}, \quad q2=\begin{pmatrix} 0&1&0&1&0&0&1\\ 1&1&1&1&1&0&1\\ 1&0&0&0&0&1&1\\ 0&0&0&0&1&1&0\\ 0&1&1&0&0&0&0\\ 1&1&0&1&0&1&1\\ 1&1&0&1&0&0&0 \end{pmatrix}.$$

The elements $q1$ and $q2$ are of orders 4 and 6. We obtained the conjugacy classes of $O_6^-(2)$ using MAGMA and are represented in the table below. The class representatives of each class $[q]_{O_6^-(2)}$ of $O_6^-(2)$ are given in terms of $7 \times 7$ matrices over $GF(2)$.

Table 7.10: The Conjugacy classes of $O_6^-(2)$

| $[q]_{O_6^-(2)}$ | Class representative | $\lvert[q]_{O_6^-(2)}\rvert$ | $[q]_{O_6^-(2)}$ | Class representative | $\lvert[q]_{O_6^-(2)}\rvert$ |
|---|---|---|---|---|---|
| $1A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1 | $2A$ | $\begin{pmatrix} 1&1&1&1&0&1&1\\ 0&1&0&0&0&0&0\\ 0&1&1&0&0&1&1\\ 0&1&1&1&1&1&1\\ 0&0&0&0&1&1&0\\ 1&1&0&1&1&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 36 |
| $2B$ | $\begin{pmatrix} 1&1&0&1&1&0&0\\ 0&0&0&1&1&0&1\\ 0&0&1&0&0&0&0\\ 0&1&0&0&1&0&1\\ 0&0&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 45 | $2C$ | $\begin{pmatrix} 1&1&1&1&0&1&1\\ 0&0&1&1&0&1&0\\ 0&0&1&0&0&0&1\\ 0&1&1&0&0&1&1\\ 0&0&0&0&1&0&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 270 |
| $2D$ | $\begin{pmatrix} 1&0&1&0&1&1&1\\ 0&0&0&1&1&0&1\\ 0&1&0&1&0&1&1\\ 0&0&1&1&1&1&0\\ 0&1&1&1&1&1&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 540 | $3A$ | $\begin{pmatrix} 1&1&0&0&1&1&0\\ 1&0&1&0&1&0&1\\ 0&0&0&0&1&1&0\\ 1&1&0&1&1&1&1\\ 0&1&1&1&0&1&1\\ 0&1&0&1&1&1&0\\ 0&1&0&1&1&0&1 \end{pmatrix}$ | 80 |
| $3B$ | $\begin{pmatrix} 1&1&1&1&1&1&1\\ 0&1&0&0&1&0&0\\ 0&1&0&1&0&1&1\\ 0&1&1&0&0&1&1\\ 0&1&1&1&0&1&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 240 | $3C$ | $\begin{pmatrix} 0&1&1&1&0&1&0\\ 0&1&0&0&1&0&0\\ 1&0&1&1&0&1&1\\ 1&0&0&0&0&1&1\\ 0&1&1&1&0&1&1\\ 0&1&1&0&1&1&1\\ 0&1&1&0&1&0&0 \end{pmatrix}$ | 480 |
| $4A$ | $\begin{pmatrix} 0&0&0&1&1&1&1\\ 1&0&1&0&1&0&1\\ 0&1&0&1&0&1&0\\ 1&0&0&0&1&1&0\\ 0&1&1&1&1&1&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 540 | $4B$ | $\begin{pmatrix} 1&1&1&1&1&1&1\\ 0&1&0&0&1&0&0\\ 0&1&1&1&1&0&0\\ 0&1&0&0&0&0&1\\ 0&1&0&1&0&0&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 540 |
| $4C$ | $\begin{pmatrix} 0&1&0&0&0&1&0\\ 1&1&1&1&0&0&1\\ 0&1&0&1&0&1&0\\ 1&1&0&1&0&1&0\\ 0&1&1&1&1&1&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1620 | $4D$ | $\begin{pmatrix} 0&1&1&0&1&0&1\\ 1&1&0&1&1&1&0\\ 0&1&1&1&1&0&1\\ 1&1&0&1&0&1&0\\ 0&1&0&1&0&0&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 3240 |

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Table 7.10 : The Conjugacy classes of $O_6^-(2)$ (continued)

| $[q]_{O_6^-(2)}$ | Class representative | $\lvert[q]_{O_6^-(2)}\rvert$ | $[q]_{O_6^-(2)}$ | Class representative | $\lvert[q]_{O_6^-(2)}\rvert$ |
|---|---|---|---|---|---|
| $5A$ | $\begin{pmatrix} 0&1&1&0&1&0&1\\ 1&0&0&1&0&0&1\\ 0&0&0&1&1&0&0\\ 0&1&0&1&0&1&0\\ 1&1&0&1&0&0&1\\ 1&1&1&0&1&1&1\\ 1&1&1&0&1&0&0 \end{pmatrix}$ | 5184 | $6A$ | $\begin{pmatrix} 1&1&0&1&1&0&0\\ 1&0&1&0&0&0&1\\ 1&1&1&1&0&0&0\\ 1&0&0&0&0&1&1\\ 0&0&1&1&0&0&0\\ 1&0&0&0&0&1&0\\ 1&0&0&0&0&0&1 \end{pmatrix}$ | 720 |
| $6B$ | $\begin{pmatrix} 1&0&1&0&1&1&1\\ 0&1&1&0&0&1&0\\ 0&0&1&0&1&0&0\\ 0&1&0&0&0&0&1\\ 0&1&1&1&1&1&1\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1140 | $6C$ | $\begin{pmatrix} 0&0&0&1&0&1&1\\ 1&1&0&1&1&1&0\\ 1&0&1&0&0&0&0\\ 0&1&1&1&0&0&1\\ 0&1&1&1&1&1&1\\ 1&0&0&0&1&1&1\\ 1&0&0&0&1&0&0 \end{pmatrix}$ | 1140 |
| $6D$ | $\begin{pmatrix} 0&0&0&1&0&1&1\\ 0&1&0&1&1&1&0\\ 0&1&0&0&0&0&1\\ 0&1&1&1&0&0&1\\ 1&0&0&0&1&0&1\\ 1&1&1&0&1&1&0\\ 1&1&1&0&1&0&1 \end{pmatrix}$ | 1440 | $6E$ | $\begin{pmatrix} 0&1&1&1&1&1&0\\ 0&0&1&1&1&1&1\\ 0&0&1&0&1&0&0\\ 0&0&0&1&1&0&0\\ 0&1&1&1&1&1&1\\ 1&0&0&0&1&1&1\\ 1&0&0&0&1&0&0 \end{pmatrix}$ | 1440 |
| $6F$ | $\begin{pmatrix} 1&0&1&0&1&1&1\\ 1&1&1&0&1&1&0\\ 0&0&1&0&1&0&0\\ 1&1&0&0&1&0&1\\ 0&1&1&1&1&1&1\\ 0&1&0&1&1&1&0\\ 0&1&0&1&1&0&1 \end{pmatrix}$ | 2160 | $6G$ | $\begin{pmatrix} 0&0&1&0&0&1&1\\ 0&1&0&1&1&1&0\\ 0&1&1&1&0&0&1\\ 0&1&0&0&0&0&1\\ 1&0&0&0&1&0&1\\ 1&1&0&1&1&1&0\\ 1&1&0&1&1&0&1 \end{pmatrix}$ | 4320 |
| $8A$ | $\begin{pmatrix} 0&0&1&1&1&0&1\\ 1&1&1&1&0&0&1\\ 0&0&0&0&1&1&0\\ 1&1&0&1&0&1&0\\ 0&1&1&1&1&1&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 6480 | $9A$ | $\begin{pmatrix} 0&0&0&0&1&0&1\\ 0&0&0&1&1&0&1\\ 1&1&0&0&0&0&1\\ 1&0&1&1&0&1&0\\ 1&1&1&0&0&0&0\\ 1&1&0&1&1&1&0\\ 1&1&0&1&1&0&1 \end{pmatrix}$ | 5760 |
| $10A$ | $\begin{pmatrix} 1&1&0&0&0&1&1\\ 1&0&1&0&1&0&1\\ 1&0&0&0&1&1&0\\ 0&0&1&0&1&0&1\\ 0&1&1&1&1&1&0\\ 1&0&1&0&0&0&1\\ 1&0&1&0&0&1&0 \end{pmatrix}$ | 5184 | $12A$ | $\begin{pmatrix} 1&1&1&1&0&1&1\\ 1&0&0&0&1&1&1\\ 1&0&0&0&0&1&1\\ 0&0&1&0&0&0&0\\ 0&1&0&1&0&0&1\\ 1&0&0&1&1&0&0\\ 1&0&0&1&1&1&1 \end{pmatrix}$ | 4320 |
| $12B$ | $\begin{pmatrix} 0&0&1&0&1&1&0\\ 1&0&0&1&1&0&0\\ 0&1&0&1&0&1&1\\ 1&0&1&1&0&1&1\\ 0&1&1&1&0&1&1\\ 1&0&0&0&1&1&1\\ 1&0&0&0&1&0&0 \end{pmatrix}$ | 4320 | | | |

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$O_6^-(2)$ has 25 conjugacy classes and under the action of $O_6^-(2)$ on $2^7$ we obtain six orbits of lengths 1, 1, 27, 27, 36 and 36. The point stabilizers for the orbits of lengths 1, 27 and 36 are $O_6^-(2)$, $2^4 : S_5$ and $S_6 \times 2$ of indices 1, 27 and 36, respectively in $O_6^-(2)$. We used Programme A in Magma [7] to compute the orbit lengths and the corresponding stabilizers. Let $\chi(O_6^-(2)|2^7)$ be the permutation character of $O_6^-(2)$ on $2^7$. We also let $\chi(O_6^-(2)|2^4 : S_5)$ and $\chi(O_6^-(2)|S_6 \times 2)$ be the permutation characters of $O_6^-(2)$ on $2^4 : S_5$ and $S_6 \times 2$, respectively . The permutation characters $\chi(O_6^-(2)|2^4 : S_5) = 1a + 6a + 20a$ and $\chi(O_6^-(2)|S_6 \times 2) = 1a + 15b + 20a$ are written in terms of the irreducible characters and are computed directly using the character table of $O_6^-(2)$.

We obtain that $\chi(O_6^-(2)|2^7) = I^{O_6^-(2)}_{O_6^-(2)} + I^{O_6^-(2)}_{O_6^-(2)} + I^{O_6^-(2)}_{2^4:S_5} + I^{O_6^-(2)}_{2^4:S_5} + I^{O_6^-(2)}_{S_6\times 2} + I^{O_6^-(2)}_{S_6\times 2}$, where $I^{O_6^-(2)}_{2^4:S_5}$ and $I^{O_6^-(2)}_{S_6\times 2}$ are the identity characters of $2^4 : S_5$ and $S_6 \times 2$ respectively, induced to $O_6^-(2)$. We note that $I^{O_6^-(2)}_{2^4:S_5} = \chi(O_6^-(2)|2^4 : S_5)$ and $I^{O_6^-(2)}_{S_6\times 2} = \chi(O_6^-(2)|S_6 \times 2)$.

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Therefore

$$\chi(O_6^-(2)|2^7) = I^{O_6^-(2)}_{O_6^-(2)} + I^{O_6^-(2)}_{O_6^-(2)} + I^{O_6^-(2)}_{2^4:S_5} + I^{O_6^-(2)}_{2^4:S_5} + I^{O_6^-(2)}_{S_6\times 2} + I^{O_6^-(2)}_{S_6\times 2}$$

$$= 1a + 1a + 1a + 6a + 20a + 1a + 6a + 20a + 1a + 15b + 20a + 1a + 15b + 20a$$

$$= 6 \times 1a + 2 \times 6a + 2 \times 15b + 4 \times 20a$$

The values of $\chi(O_6^-(2)|2^7)$ on the different classes of $O_6^-(2)$ determine the number $l$ of fixed points of each $q \in O_6^-(2)$ in $2^7$. Now these values of the $l$'s will enable us to calculate the conjugacy classes of $2^7 : O_6^-(2)$. These values of $l$'s are listed in the table below.

Table 7.11: The values of $\chi(O_6^-(2)|2^7)$ on the different classes of $O_6^-(2)$

| $[q]_{O_6^-(2)}$ | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $3A$ | $3B$ | $3C$ | $4A$ | $4B$ | $4C$ | $4D$ | $5A$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(O_6^-(2)\|O_6^-(2))$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(O_6^-(2)\|O_6^-(2))$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(O_6^-(2)\|2^4 : S_5)$ | 27 | 15 | 3 | 7 | 3 | 0 | 9 | 0 | 1 | 3 | 5 | 1 | 2 |
| $\chi(O_6^-(2)\|2^4 : S_5)$ | 27 | 15 | 3 | 7 | 3 | 0 | 9 | 0 | 1 | 3 | 5 | 1 | 2 |
| $\chi(O_6^-(2)\|S_6 \times 2)$ | 36 | 16 | 12 | 8 | 4 | 0 | 6 | 3 | 6 | 0 | 2 | 2 | 1 |
| $\chi(O_6^-(2)\|S_6 \times 2)$ | 36 | 16 | 12 | 8 | 4 | 0 | 6 | 3 | 6 | 0 | 2 | 2 | 1 |
| $l$ | 128 | 64 | 32 | 32 | 16 | 2 | 32 | 8 | 16 | 8 | 16 | 8 | 8 |

| $[q]_{O_6^-(2)}$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ | $6G$ | $8A$ | $9A$ | $10A$ | $12A$ | $12B$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(O_6^-(2)\|O_6^-(2))$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(O_6^-(2)\|O_6^-(2))$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(O_6^-(2)\|2^4 : S_5)$ | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| $\chi(O_6^-(2)\|2^4 : S_5)$ | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| $\chi(O_6^-(2)\|S_6 \times 2)$ | 0 | 0 | 1 | 3 | 4 | 2 | 1 | 0 | 0 | 1 | 0 | 0 |
| $\chi(O_6^-(2)\|S_6 \times 2)$ | 0 | 0 | 1 | 3 | 4 | 2 | 1 | 0 | 0 | 1 | 0 | 0 |
| $l$ | 2 | 8 | 4 | 8 | 16 | 8 | 4 | 4 | 2 | 4 | 2 | 4 |

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These values of $l$ enabled us to determine the number $f_j$ of orbits $Q_i$'s , $1 \leq i \leq l$ which have fused together under the action of $C_{O_6^-(2)}(q)$, for each class representative $q \in O_6^-(2)$, to form one orbit $\triangle_f$. We used Programme A(see Appendix A) in MAGMA [7] due to Ali[1] to calculate these $f_j$'s (see Appendix A). These values of the $f_j$'s together with the lengths of each class $[y]_{2^7:O_6^-(2)}$ and its corresponding centralizer $C_{2^7:O_6^-(2)}(y)$ as well as the $d_j$'s where $d_jq$ is a representative of the $\triangle_f$, are listed in Table 7.12 below giving the conjugacy classes of $G = 2^7 : O_6^-(2)$.

Table 7.12: The conjugacy classes of elements of $G = 2^7 : O_6^-(2)$

| $[q]_{O_6^-(2)}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:O_6^-(2)}$ | $\lvert[g]_{2^7:O_6^-(2)}\rvert$ | $C_{2^7:O_6^-(2)}(g)$ |
|---|---|---|---|---|---|---|---|
| $1A$ | 128 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $1A$ | 1 | 6635520 |
| | | $f_2 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,1,1)$ | $2A$ | 1 | 6635520 |
| | | $f_3 = 1$ | $(1,1,1,0,1,1,1)$ | $(1,1,1,0,1,1,1)$ | $2B$ | 27 | 245760 |
| | | $f_4 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,1,1,1,1,1,0)$ | $2C$ | 27 | 245760 |
| | | $f_5 = 1$ | $(1,1,1,1,1,1,1)$ | $(1,1,1,1,1,1,1)$ | $2D$ | 36 | 184320 |
| | | $f_6 = 1$ | $(1,1,0,1,1,1,1)$ | $(1,1,0,1,1,1,1)$ | $2E$ | 36 | 184320 |
| $2A$ | 64 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2F$ | 72 | 92160 |
| | | $f_2 = 1$ | $(0,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2G$ | 72 | 92160 |
| | | $f_3 = 6$ | $(1,1,1,1,0,1,0)$ | $(0,1,1,1,1,1,0)$ | $4A$ | 432 | 15360 |
| | | $f_4 = 6$ | $(1,1,1,0,1,1,1)$ | $(0,1,1,1,1,1,0)$ | $4B$ | 432 | 15360 |
| | | $f_5 = 10$ | $(1,0,1,1,0,1,1)$ | $(0,1,1,1,1,1,0)$ | $4C$ | 720 | 9216 |
| | | $f_6 = 10$ | $(1,1,1,1,0,1,1)$ | $(0,1,1,1,1,1,0)$ | $4D$ | 720 | 9216 |
| | | $f_7 = 15$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2H$ | 1080 | 6144 |
| | | $f_8 = 15$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2I$ | 1080 | 6144 |
| $2B$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2J$ | 180 | 36864 |
| | | $f_2 = 1$ | $(0,1,0,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2K$ | 180 | 36864 |
| | | $f_3 = 3$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2L$ | 540 | 12288 |
| | | $f_4 = 3$ | $(0,0,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2M$ | 540 | 12288 |
| | | $f_5 = 12$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,0,1,1,1)$ | $4E$ | 2160 | 3072 |
| | | $f_6 = 12$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,1,0,1,0)$ | $4F$ | 2160 | 3072 |
| $2C$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2N$ | 1080 | 6144 |
| | | $f_2 = 1$ | $(0,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2O$ | 1080 | 6144 |
| | | $f_3 = 1$ | $(1,0,1,1,1,0,1)$ | $(0,0,1,1,1,0,0)$ | $4G$ | 1080 | 6144 |
| | | $f_4 = 1$ | $(1,0,1,1,1,1,0)$ | $(0,0,1,1,1,0,0)$ | $4H$ | 1080 | 6144 |
| | | $f_5 = 3$ | $(1,1,0,1,1,1,1)$ | $(0,0,1,1,1,0,0)$ | $4I$ | 3240 | 2048 |
| | | $f_6 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,1,1,0,0)$ | $4J$ | 3240 | 2048 |
| | | $f_7 = 3$ | $(0,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2P$ | 3240 | 2048 |
| | | $f_8 = 3$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2Q$ | 3240 | 2048 |
| | | $f_9 = 8$ | $(1,1,1,1,1,1,0)$ | $(0,0,1,0,0,1,1)$ | $4K$ | 8640 | 768 |
| | | $f_{10} = 8$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,0,0,1,1)$ | $4L$ | 8640 | 768 |
| $2D$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2R$ | 4320 | 1536 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,1,0,0,1,0)$ | $4M$ | 4320 | 1536 |
| | | $f_3 = 1$ | $(1,1,1,0,0,1,1)$ | $(0,0,1,0,0,1,0)$ | $4N$ | 4320 | 1536 |
| | | $f_4 = 1$ | $(1,0,1,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $2S$ | 4320 | 1536 |
| | | $f_5 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,1,0,0,1)$ | $4O$ | 12960 | 512 |
| | | $f_6 = 3$ | $(1,0,1,1,1,1,1)$ | $(1,0,0,0,0,0,0)$ | $4P$ | 12960 | 512 |
| | | $f_7 = 3$ | $(1,1,1,1,0,1,0)$ | $(1,0,1,1,0,0,1)$ | $4Q$ | 12960 | 512 |
| | | $f_8 = 3$ | $(1,1,1,1,1,0,1)$ | $(1,0,1,0,0,1,0)$ | $4R$ | 12960 | 512 |
| $3A$ | 2 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3A$ | 5120 | 1296 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,1,1)$ | $6A$ | 5120 | 1296 |
| $3B$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3B$ | 960 | 6912 |
| | | $f_2 = 1$ | $(1,1,1,1,0,0,0)$ | $(0,0,0,0,0,1,1)$ | $6B$ | 960 | 6912 |
| | | $f_3 = 6$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,1,0,1)$ | $6C$ | 5760 | 1152 |
| | | $f_4 = 6$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,1,1,0)$ | $6D$ | 5760 | 1152 |
| | | $f_5 = 9$ | $(1,1,0,1,1,1,1)$ | $(1,0,0,1,1,0,1)$ | $6E$ | 8640 | 768 |
| | | $f_6 = 9$ | $(1,1,1,1,1,1,1)$ | $(1,0,1,1,1,0,1)$ | $6F$ | 8640 | 768 |
| $3C$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3C$ | 7680 | 864 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,1,1)$ | $6G$ | 7680 | 864 |
| | | $f_3 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,0,0,1,0)$ | $6H$ | 23040 | 288 |
| | | $f_4 = 3$ | $(1,1,0,1,1,1,1)$ | $(0,0,1,0,0,0,1)$ | $6I$ | 23040 | 288 |
| $4A$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4S$ | 4320 | 1536 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4T$ | 4320 | 1536 |
| | | $f_3 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4U$ | 12960 | 512 |
| | | $f_4 = 3$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4V$ | 12960 | 512 |
| | | $f_5 = 4$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,1,1,0,0)$ | $8A$ | 17280 | 384 |
| | | $f_6 = 4$ | $(1,1,1,1,1,1,0)$ | $(0,0,1,1,1,0,0)$ | $8B$ | 17280 | 384 |
| $4B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4W$ | 8640 | 768 |
| | | $f_2 = 1$ | $(0,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4X$ | 8640 | 768 |
| | | $f_3 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4Y$ | 25920 | 256 |
| | | $f_4 = 3$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4Z$ | 25920 | 256 |

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Table 7.12 : The conjugacy classes of elements of $G = 2^7 : O_6^-(2)$ (continued)

| $[g]_{O_6^-(2)}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:O_6^-(2)}$ | $\lvert[g]_{2^7:O_6^-(2)}\rvert$ | $C_{2^7:O_6^-(2)}(g)$ |
|---|---|---|---|---|---|---|---|
| $4C$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AA$ | 12960 | 512 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AB$ | 12960 | 512 |
| | | $f_3 = 1$ | $(1,1,1,0,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4AC$ | 12960 | 512 |
| | | $f_4 = 1$ | $(1,1,1,0,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4AD$ | 12960 | 512 |
| | | $f_5 = 2$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AE$ | 25920 | 256 |
| | | $f_6 = 2$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AF$ | 25920 | 256 |
| | | $f_7 = 4$ | $(1,1,1,1,1,0,1)$ | $(1,0,0,0,1,0,0)$ | $8C$ | 51840 | 128 |
| | | $f_8 = 4$ | $(1,1,1,1,1,1,0)$ | $(1,0,0,0,1,0,0)$ | $8D$ | 51840 | 128 |
| $4D$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AG$ | 51840 | 128 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,1,1,0,0,0,1)$ | $8E$ | 51840 | 128 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,1,1,0,0,0,1)$ | $8F$ | 51840 | 128 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4AH$ | 51840 | 128 |
| | | $f_5 = 1$ | $(0,0,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AI$ | 51840 | 128 |
| | | $f_6 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,1,1,0,0,0,1)$ | $8G$ | 51840 | 128 |
| | | $f_7 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,1,1,0,0,0,1)$ | $8H$ | 51840 | 128 |
| | | $f_8 = 1$ | $(1,1,1,0,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4AJ$ | 51840 | 128 |
| $5A$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $5A$ | 82944 | 80 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,1,1)$ | $10A$ | 82944 | 80 |
| | | $f_3 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,1,1,1,1,0,1)$ | $10B$ | 82944 | 80 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,1,1,1,1,1,0)$ | $10C$ | 82944 | 80 |
| | | $f_5 = 2$ | $(1,1,1,0,1,1,1)$ | $(1,1,1,0,1,1,1)$ | $10D$ | 165888 | 40 |
| | | $f_6 = 2$ | $(1,1,1,1,0,1,1)$ | $(1,1,1,0,1,0,0)$ | $10E$ | 165888 | 40 |
| $6A$ | 2 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6J$ | 46080 | 144 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $6K$ | 46080 | 144 |
| $6B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6L$ | 23040 | 288 |
| | | $f_2 = 1$ | $(0,0,1,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $6M$ | 23040 | 288 |
| | | $f_3 = 3$ | $(1,1,0,0,0,1,0)$ | $(1,1,1,0,1,0,0)$ | $12A$ | 69120 | 96 |
| | | $f_4 = 3$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,1,0,1,0)$ | $12B$ | 69120 | 96 |
| $6C$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6N$ | 46080 | 144 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,1,1,0,1)$ | $12C$ | 46080 | 144 |
| | | $f_3 = 1$ | $(1,1,0,0,0,0,1)$ | $(0,0,1,1,1,0,1)$ | $12D$ | 46080 | 144 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $6O$ | 46080 | 144 |
| $6D$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6P$ | 23040 | 288 |
| | | $f_2 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Q$ | 23040 | 288 |
| | | $f_3 = 3$ | $(0,0,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6R$ | 69120 | 96 |
| | | $f_4 = 3$ | $(1,1,0,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $6S$ | 69120 | 96 |
| $6E$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6T$ | 11520 | 576 |
| | | $f_2 = 1$ | $(0,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $6U$ | 11520 | 576 |
| | | $f_3 = 1$ | $(1,1,1,0,1,1,1)$ | $(1,0,0,0,0,0,0)$ | $12E$ | 11520 | 576 |
| | | $f_4 = 1$ | $(1,1,1,0,1,0,0)$ | $(1,0,0,0,0,0,0)$ | $12F$ | 11520 | 576 |
| | | $f_5 = 3$ | $(0,1,0,0,0,1,0)$ | $(1,0,0,0,0,0,0)$ | $12G$ | 34560 | 192 |
| | | $f_6 = 3$ | $(0,1,0,0,0,0,1)$ | $(1,0,0,0,0,0,0)$ | $12H$ | 34560 | 192 |
| | | $f_7 = 3$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $6V$ | 34560 | 192 |
| | | $f_8 = 3$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6W$ | 34560 | 192 |
| $6F$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6X$ | 34560 | 192 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Y$ | 34560 | 192 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,1,1,0,0)$ | $12I$ | 34560 | 192 |
| | | $f_4 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,1,1,1,0,0)$ | $12J$ | 34560 | 192 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,1,0,0,1,1)$ | $12K$ | 69120 | 96 |
| | | $f_6 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,0,0,1,1)$ | $12L$ | 69120 | 96 |
| $6G$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6Z$ | 138240 | 48 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AA$ | 138240 | 48 |
| | | $f_3 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,1,0,0,1,0)$ | $12M$ | 138240 | 48 |
| | | $f_4 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,1,0,0,1,0)$ | $12N$ | 138240 | 48 |
| $8A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $8I$ | 207360 | 32 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $8J$ | 207360 | 32 |
| | | $f_3 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8K$ | 207360 | 32 |
| | | $f_4 = 1$ | $(1,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8L$ | 207360 | 32 |
| $9A$ | 2 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $9A$ | 368640 | 18 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,1,1)$ | $18A$ | 368640 | 18 |
| $10A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $10F$ | 165888 | 40 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $10G$ | 165888 | 40 |
| | | $f_3 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,1,1,1,1,1,0)$ | $20A$ | 165888 | 40 |
| | | $f_4 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,1,1,1,1,1,0)$ | $20B$ | 165888 | 40 |
| $12A$ | 2 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12O$ | 276480 | 24 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12P$ | 276480 | 24 |
| $12B$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12Q$ | 138240 | 48 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,1,1,1,0,0)$ | $24A$ | 138240 | 48 |
| | | $f_3 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,1,1,0,0)$ | $24B$ | 138240 | 48 |
| | | $f_4 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12R$ | 138240 | 48 |

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### 7.2.2 The Inertia groups of $2^7 : O_6^-(2)$

The action of $O_6^-(2)$ on the conjugacy classes of $2^7$ determine 6 orbits being formed, with respective lenghts of$1, 1, 27, 27, 36$ and 36. Therefore by Brauer's Theorem $O_6^-(2)$ acting on $Irr(2^7)$ will also form 6 orbits of lenghts 1,$r$,$s$,$t$,$u$ and $v$ such that $r + s + t + u + v = 127$. Since $O_6^-(2) \cong U_4(2).2$, then from ATLAS [11] we deduce that $r = s = 36$ and $t = u = 27$ and $v$= 1 . Hence there are six inertia groups $H_i = 2^7 : \bar{H}_i$, $i$ = 1,2,3,4,5 and 6, such that $[G : H_1]$= $[G : H_2] = 1$ , $[G : H_3]$= $[G : H_4] = 27$ and $[G : H_5]$= $[G : H_6] = 36$. The $\bar{H}_i$'s are the inertia factor groups of the inertia groups , which are maximal subgroups or sit in the maximal subgroups of $O_6^-(2)$, are of indices $1, 1, 27, 27, 36$ and 36 in $O_6^-(2)$ respectively. By checking the ATLAS for the indices of the maximal subgroups of $O_6^-(2) \cong U_4(2).2$ we obtain that $\bar{H}_1 = \bar{H}_2 = O_6^-(2)$, $\bar{H}_3 = \bar{H}_4 = 2^4 : S_5$ and $\bar{H}_5 = \bar{H}_6 = S_6 \times 2$.

Note that the sum of the number of conjugacy classes of these inertia factors must in total be equal to 130, that is, the number of the conjugacy classes of $2^7 : O_6^-(2)$. Also the action of $O_6^-(2)$ on $Irr(2^7)$ form 6 orbits of lenghts 1,$r$,$t$,$u$ and $v$ such that $r$+$t$+$u$ +$v = 127$. Hence, by checking all the indices of maximal subgroups of $O_6^-(2)$ in the ATLAS and all combinations that can possibly satisfy the previous two facts, we deduce that $r = s = 36$ , $t = u = 27$ and $v = 1$ are the only lengths of these orbits. $2^4 : S_5$ and $S_6 \times 2$ are the only copies of maximal subgroups of $O_6^-(2)$, up to isomorphism, that have indices of 27 and 36 in $O_6^-(2)$ .

The inertia groups $2^4 : S_5$ and $S_6 \times 2$ are constructed from elements within $O_6^-(2)$ and the generators are as follows :

$S_6 \times 2 = \langle \alpha_1, \alpha_2, \alpha_3 \rangle$ , $\alpha_1 \in 2C$ ,$\alpha_2 \in 2D$, $\alpha_3 \in 6D$ where

$$\alpha_1 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&0&1&1&0&1\\ 1&0&0&1&0&1&1\\ 1&0&0&0&1&1&1\\ 1&1&1&1&1&1&1\\ 1&1&1&1&1&0&0 \end{pmatrix} \quad , \quad \alpha_2 = \begin{pmatrix} 0&1&1&0&0&1&0\\ 0&0&1&1&0&0&0\\ 0&1&0&0&1&1&1\\ 0&0&0&0&1&1&1\\ 0&0&0&1&0&1&1\\ 1&1&1&1&1&1&1\\ 1&1&1&1&1&0&0 \end{pmatrix} \quad , \quad \alpha_2 = \begin{pmatrix} 0&0&1&1&1&0&1\\ 0&0&1&0&1&1&1\\ 0&0&0&1&0&0&0\\ 0&1&0&0&1&1&1\\ 0&0&0&0&1&0&0\\ 1&0&1&1&1&1&1\\ 1&0&1&1&1&0&0 \end{pmatrix}$$

$2^4 : S_5 = \langle \lambda_1, \lambda_2 \rangle$ , $\lambda_1 \in 2A$ ,$\lambda_2 \in 4C$ where

$$\lambda_1 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 1 & 1 & 0 & 1 & 0 & 0 & 1 \\ 1 & 1 & 0 & 1 & 0 & 1 & 0 \end{pmatrix} \quad , \quad \lambda_2 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 1 & 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 1 & 0 \\ 1 & 0 & 1 & 1 & 1 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 \end{pmatrix}$$

### 7.2.3 The fusions of $2^4 : S_5$ and $S_6 \times 2$ into $O_6^-(2)$

We obtain the fusion maps of the inertia factors $2^4 : S_5$ and $S_6 \times 2$ into $O_6^-(2)$ , by using direct matrix conjugations in $O_6^-(2)$ and the permutation characters of $O_6^-(2)$ on $2^4 : S_5$ and $S_6 \times 2$ . MAGMA was used for the various computations. The fusion maps of the inertia factor groups into $O_6^-(2)$ are shown in the tables below.

Table 7.13: The fusion of $2^4 : S_5$ into $O_6^-(2)$

| $[\tilde{h}]_{2^4:S_5}$ | $[q]_{O_6^-(2)}$ | $[\tilde{h}]_{2^4:S_5}$ | $[q]_{O_6^-(2)}$ | $[\tilde{h}]_{2^4:S_5}$ | $[x]_{O_6^-(2)}$ | $[\tilde{h}]_{2^4:S_5}$ | $[q]_{O_6^-(2)}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | $2E$ | $2C$ | $4D$ | $4D$ | $6C$ | $6E$ |
| $2A$ | $2B$ | $3A$ | $3B$ | $4E$ | $4C$ | $8A$ | $8A$ |
| $2B$ | $2C$ | $4A$ | $4A$ | $5A$ | $5A$ | $12A$ | $12B$ |
| $2C$ | $2A$ | $4B$ | $4C$ | $6A$ | $6F$ | | |
| $2D$ | $2D$ | $4C$ | $4B$ | $6B$ | $6B$ | | |

Table 7.14: The fusion of $S_6 \times 2$ into $O_6^-(2)$

| $[\tilde{h}]_{S_6\times 2}$ | $[q]_{O_6^-(2)}$ | $[\tilde{h}]_{S_6\times 2}$ | $[q]_{O_6^-(2)}$ | $[\tilde{h}]_{S_6\times 2}$ | $[q]_{O_6^-(2)}$ | $[\tilde{h}]_{S_6\times 2}$ | $[x]_{O_6^-(2)}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | $2F$ | $2D$ | $4C$ | $4D$ | $6D$ | $6F$ |
| $2A$ | $2A$ | $2G$ | $2C$ | $4D$ | $4D$ | $6E$ | $6G$ |
| $2B$ | $2C$ | $3A$ | $3B$ | $5A$ | $5A$ | $6F$ | $6E$ |
| $2C$ | $2D$ | $3B$ | $3C$ | $6A$ | $6C$ | $10A$ | $10A$ |
| $2D$ | $2A$ | $4A$ | $4C$ | $6B$ | $6E$ | | |
| $2E$ | $2B$ | $4B$ | $4A$ | $6C$ | $6D$ | | |

### 7.2.4 The Fischer-Clifford Matrices of $2^7 : O_6^-(2)$

The Fischer-Clifford matrices of $2^7 : O_6^-(2)$ were constructed by using the properties of Fischer-Clifford matrices which are given in Chapter 5 together with the fusions maps (Table 7.13 and Table 7.14) of the inertia factor groups into $O_6^-(2)$. Note each conjugacy class $[q]$ of $O_6^-(2)$ with representative $q \in O_6^-(2)$ corresponds to a Fischer-Clifford matrix $M(q)$ of $2^7 : O_6^-(2)$ . See the example in Section 7.1.4 for the detailed calculations of Fischer-Clifford matrices for a split extension group.

Table 7.15: The Fischer-Clifford Matrices of $2^7 : O_6^-(2)$

| $M(q)$ | $M(q)$ |
|---|---|
| $M(1A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 \\ 27 & -27 & 5 & -5 & 3 & -3 \\ 27 & 27 & -5 & -5 & 3 & 3 \\ 36 & -36 & -4 & 4 & -4 & 4 \\ 36 & 36 & 4 & 4 & -4 & -4 \end{pmatrix}$ | $M(2A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 15 & -15 & -5 & 5 & -3 & 3 & 1 & -1 \\ 15 & 15 & -5 & -5 & 3 & 3 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 15 & -15 & 5 & -5 & 3 & -3 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 15 & 15 & 5 & 5 & -3 & -3 & -1 & -1 \end{pmatrix}$ |
| $M(2B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 3 & -3 & 3 & -3 & -1 & 1 \\ 3 & 3 & 3 & 3 & -1 & -1 \\ 12 & -12 & -4 & 4 & 0 & 0 \\ 12 & 12 & -4 & -4 & 0 & 0 \end{pmatrix}$ | $M(2C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 6 & -6 & 6 & -6 & 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 6 & 6 & -6 & -6 & 2 & 2 & -2 & -2 & 0 & 0 \\ 2 & -2 & 2 & -2 & -2 & 2 & 2 & -2 & 0 & 0 \\ 6 & -6 & -6 & 6 & -2 & 2 & -2 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & -2 & -2 & 2 & 2 & 0 & 0 \\ 6 & 6 & 6 & 6 & -2 & -2 & -2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(2D) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 \\ 3 & -3 & 3 & -3 & -1 & -1 & 1 & 1 \\ 3 & 3 & 3 & 3 & -1 & -1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 3 & -3 & -3 & 3 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 3 & 3 & -3 & -3 & -1 & 1 & 1 & -1 \end{pmatrix}$ | $M(3A) = \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$ |
| $M(3B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 9 & -9 & -3 & 3 & -1 & 1 \\ 9 & 9 & -3 & -3 & 1 & 1 \\ 6 & -6 & 2 & -2 & 2 & -2 \\ 6 & 6 & 2 & 2 & -2 & -2 \end{pmatrix}$ | $M(3C) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 3 & -3 & -1 & 1 \\ 3 & 3 & -1 & -1 \end{pmatrix}$ |
| $M(4A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 6 & -6 & -2 & 2 & 0 & 0 \\ 6 & 6 & -2 & -2 & 0 & 0 \end{pmatrix}$ | $M(4B) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 3 & -3 & -1 & 1 \\ 3 & 3 & -1 & -1 \end{pmatrix}$ |
| $M(4C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 \\ 2 & -2 & -2 & 2 & -2 & 2 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ | $M(4D) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \end{pmatrix}$ |

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Table: 7.15 The Fischer-Clifford Matrices of $2^7 : O_6^-(2)$(continued)

| $M(g)$ | $M(g)$ |
|---|---|
| $M(5A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & 0 & 0 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(6A) = \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$ |
| $M(6B) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 3 & -3 & -1 & 1 \\ 3 & 3 & -1 & -1 \end{pmatrix}$ | $M(6C) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \end{pmatrix}$ |
| $M(6D) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 3 & -3 & -1 & 1 \\ 3 & 3 & -1 & -1 \end{pmatrix}$ | $M(6E) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 3 & -3 & 3 & -3 & 1 & -1 & 1 & -1 \\ 3 & 3 & -3 & -3 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 3 & -3 & -3 & 3 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 3 & 3 & 3 & 3 & -1 & -1 & -1 & -1 \end{pmatrix}$ |
| $M(6F) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ | $M(6G) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 \end{pmatrix}$ |
| $M(8A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(9A) = \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$ |
| $M(10A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(12A) = \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$ |
| $M(12B) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \end{pmatrix}$ | |

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### 7.2.5 Character Table of $2^7 : O_6^-(2)$

The character table of $G = 2^7 : O_6^-(2)$ was constructed through the above Fischer-Clifford Matrices and the character tables of the 6 inertia factor groups together with their respective fusion maps into $O_6^-(2)$.We partitioned the set of irreducible characters of $G = 2^7 : O_6^-(2)$ into 6 blocks $B_1$, $B_2$, $B_3$, $B_4$, $B_5$ and $B_6$ corresponding to the inertia factor groups $H_1$, $H_2$, $H_3$, $H_4$, $H_5$ and $H_6$, respectively. Therefore $Irr(G = 2^7 : O_6^-(2)) = \bigcup_{i=1}^{6} B_i$ , where $B_1 = \{\chi_j | 1 \leq j \leq 25\}$ , $B_2 = \{\chi_j | 26 \leq j \leq 50\}$ , $B_3 = \{\chi_j | 51 \leq j \leq 68\}$ , $B_4 = \{\chi_j | 69 \leq j \leq 86\}$ , $B_5 = \{\chi_j | 87 \leq j \leq 108\}$ , $B_6 = \{\chi_j | 109 \leq j \leq 130\}$. The complete character table is given in Table 7.16 .

Table 7.16: charactertable of $2^7 : O_6^-(2)$

| | $1A$ | | | | | | $2A$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $4A$ | $4B$ | $4C$ | $4D$ | $2H$ | $2I$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 6 | 6 | 6 | 6 | 6 | 6 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_4$ | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_5$ | 10 | 10 | 10 | 10 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_6$ | 15 | 15 | 15 | 15 | 15 | 15 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_7$ | 15 | 15 | 15 | 15 | 15 | 15 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_8$ | 15 | 15 | 15 | 15 | 15 | 15 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_9$ | 15 | 15 | 15 | 15 | 15 | 15 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{10}$ | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{11}$ | 20 | 20 | 20 | 20 | 20 | 20 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{12}$ | 20 | 20 | 20 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 24 | 24 | 24 | 24 | 24 | 24 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{14}$ | 24 | 24 | 24 | 24 | 24 | 24 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{15}$ | 30 | 30 | 30 | 30 | 30 | 30 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{16}$ | 30 | 30 | 30 | 30 | 30 | 30 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{17}$ | 60 | 60 | 60 | 60 | 60 | 60 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{18}$ | 60 | 60 | 60 | 60 | 60 | 60 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{19}$ | 60 | 60 | 60 | 60 | 60 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 64 | 64 | 64 | 64 | 64 | 64 | -16 | -16 | -16 | -16 | -16 | -16 | -16 | -16 |
| $\chi_{21}$ | 64 | 64 | 64 | 64 | 64 | 64 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| $\chi_{22}$ | 80 | 80 | 80 | 80 | 80 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 81 | 81 | 81 | 81 | 81 | 81 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 |
| $\chi_{24}$ | 81 | 81 | 81 | 81 | 81 | 81 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{25}$ | 90 | 90 | 90 | 90 | 90 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{27}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{28}$ | 6 | -6 | -6 | 6 | 6 | -6 | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{29}$ | 6 | -6 | -6 | 6 | 6 | -6 | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{30}$ | 10 | -10 | -10 | 10 | 10 | -10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 15 | -15 | -15 | 15 | 15 | -15 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 |
| $\chi_{32}$ | 15 | -15 | -15 | 15 | 15 | -15 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{33}$ | 15 | -15 | -15 | 15 | 15 | -15 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 |
| $\chi_{34}$ | 15 | -15 | -15 | 15 | 15 | -15 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{35}$ | 20 | -20 | -20 | 20 | 20 | -20 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 |
| $\chi_{36}$ | 20 | -20 | -20 | 20 | 20 | -20 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{37}$ | 20 | -20 | -20 | 20 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 24 | -24 | -24 | 24 | 24 | -24 | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{39}$ | 24 | -24 | -24 | 24 | 24 | -24 | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{40}$ | 30 | -30 | -30 | 30 | 30 | -30 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 |
| $\chi_{41}$ | 30 | -30 | -30 | 30 | 30 | -30 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{42}$ | 60 | -60 | -60 | 60 | 60 | -60 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{43}$ | 60 | -60 | -60 | 60 | 60 | -60 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 |
| $\chi_{44}$ | 60 | -60 | -60 | 60 | 60 | -60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 64 | -64 | -64 | 64 | 64 | -64 | -16 | 16 | -16 | 16 | 16 | -16 | 16 | -16 |
| $\chi_{46}$ | 64 | -64 | -64 | 64 | 64 | -64 | 16 | -16 | 16 | -16 | -16 | 16 | -16 | 16 |
| $\chi_{47}$ | 80 | -80 | -80 | 80 | 80 | -80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 81 | -81 | -81 | 81 | 81 | -81 | -9 | 9 | -9 | 9 | 9 | -9 | 9 | -9 |
| $\chi_{49}$ | 81 | -81 | -81 | 81 | 81 | -81 | 9 | -9 | 9 | -9 | -9 | 9 | -9 | 9 |
| $\chi_{50}$ | 90 | -90 | -90 | 90 | 90 | -90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 27 | -27 | 5 | -5 | 3 | -3 | 15 | -15 | -5 | 5 | -3 | 3 | 1 | -1 |
| $\chi_{52}$ | 27 | -27 | 5 | -5 | 3 | -3 | -15 | 15 | 5 | -5 | 3 | -3 | -1 | 1 |
| $\chi_{53}$ | 108 | -108 | 20 | -20 | 12 | -12 | 30 | -30 | -10 | 10 | -6 | 6 | 2 | -2 |
| $\chi_{54}$ | 108 | -108 | 20 | -20 | 12 | -12 | -30 | 30 | 10 | -10 | 6 | -6 | -2 | 2 |
| $\chi_{55}$ | 135 | -135 | 25 | -25 | 15 | -15 | 45 | -45 | -15 | 15 | -9 | 9 | 3 | -3 |
| $\chi_{56}$ | 135 | -135 | 25 | -25 | 15 | -15 | -45 | 45 | 15 | -15 | 9 | -9 | -3 | 3 |
| $\chi_{57}$ | 135 | -135 | 25 | -25 | 15 | -15 | -15 | 15 | 5 | -5 | 3 | -3 | -1 | 1 |
| $\chi_{58}$ | 135 | -135 | 25 | -25 | 15 | -15 | 15 | -15 | -5 | 5 | -3 | 3 | 1 | -1 |
| $\chi_{59}$ | 162 | -162 | 30 | -30 | 18 | -18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 270 | -270 | 50 | -50 | 30 | -30 | -30 | 30 | 10 | -10 | 6 | -6 | -2 | 2 |
| $\chi_{61}$ | 270 | -270 | 50 | -50 | 30 | -30 | 30 | -30 | -10 | 10 | -6 | 6 | 2 | -2 |
| $\chi_{62}$ | 270 | -270 | 50 | -50 | 30 | -30 | 60 | -60 | -20 | 20 | -12 | 12 | 4 | -4 |
| $\chi_{63}$ | 270 | -270 | 50 | -50 | 30 | -30 | -60 | 60 | 20 | -20 | 12 | -12 | -4 | 4 |
| $\chi_{64}$ | 270 | -270 | 50 | -50 | 30 | -30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 405 | -405 | 75 | -75 | 45 | -45 | -45 | 45 | 15 | -15 | 9 | -9 | -3 | 3 |
| $\chi_{66}$ | 405 | -405 | 75 | -75 | 45 | -45 | 45 | -45 | -15 | 15 | -9 | 9 | 3 | -3 |
| $\chi_{67}$ | 540 | -540 | 100 | -100 | 60 | -60 | -30 | 30 | 10 | -10 | 6 | -6 | -2 | 2 |
| $\chi_{68}$ | 540 | -540 | 100 | -100 | 60 | -60 | 30 | -30 | -10 | 10 | -6 | 6 | 2 | -2 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $2B$ | | | | | | $2C$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2J$ | $2K$ | $2L$ | $2M$ | $4E$ | $4F$ | $2N$ | $2O$ | $4G$ | $4H$ | $4I$ | $4J$ | $2P$ | $2Q$ | $4K$ | $4L$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_4$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_5$ | -6 | -6 | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_7$ | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_8$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_9$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{10}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{11}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{12}$ | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{13}$ | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{16}$ | -10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{17}$ | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{18}$ | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{19}$ | 12 | 12 | 12 | 12 | 12 | 12 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | -16 | -16 | -16 | -16 | -16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 9 | 9 | 9 | 9 | 9 | 9 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{24}$ | 9 | 9 | 9 | 9 | 9 | 9 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{25}$ | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 |
| $\chi_{26}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{27}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{28}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{29}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{30}$ | -6 | 6 | -6 | 6 | -6 | 6 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{31}$ | 7 | -7 | 7 | -7 | 7 | -7 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{32}$ | 7 | -7 | 7 | -7 | 7 | -7 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{33}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{34}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{35}$ | 4 | -4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{36}$ | 4 | -4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{37}$ | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{38}$ | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | -10 | 10 | -10 | 10 | -10 | 10 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{41}$ | -10 | 10 | -10 | 10 | -10 | 10 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{42}$ | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{43}$ | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{44}$ | 12 | -12 | 12 | -12 | 12 | -12 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | -16 | 16 | -16 | 16 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 9 | -9 | 9 | -9 | 9 | -9 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 |
| $\chi_{49}$ | 9 | -9 | 9 | -9 | 9 | -9 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 |
| $\chi_{50}$ | -6 | 6 | -6 | 6 | -6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 | -6 | 6 | 6 | -6 |
| $\chi_{51}$ | 3 | -3 | 3 | -3 | -1 | 1 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{52}$ | 3 | -3 | 3 | -3 | -1 | 1 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{53}$ | 12 | -12 | 12 | -12 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{54}$ | 12 | -12 | 12 | -12 | -4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{55}$ | -9 | 9 | -9 | 9 | 3 | -3 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{56}$ | -9 | 9 | -9 | 9 | 3 | -3 | 7 | -7 | 5 | -5 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{57}$ | 15 | -15 | 15 | -15 | -5 | 5 | 11 | -11 | 1 | -1 | 7 | -7 | 3 | -3 | 5 | -5 |
| $\chi_{58}$ | 15 | -15 | 15 | -15 | -5 | 5 | 11 | -11 | 1 | -1 | 7 | -7 | 3 | -3 | 5 | -5 |
| $\chi_{59}$ | 18 | -18 | 18 | -18 | -6 | 6 | -6 | 6 | -18 | 18 | 2 | -2 | 10 | -10 | 6 | -6 |
| $\chi_{60}$ | 6 | -6 | 6 | -6 | -2 | 2 | -14 | 14 | -10 | 10 | -6 | 6 | 2 | -2 | -2 | 2 |
| $\chi_{61}$ | 6 | -6 | 6 | -6 | -2 | 2 | -14 | 14 | -10 | 10 | -6 | 6 | 2 | -2 | -2 | 2 |
| $\chi_{62}$ | 6 | -6 | 6 | -6 | -2 | 2 | 10 | -10 | 14 | -14 | 2 | -2 | -6 | 6 | -2 | 2 |
| $\chi_{63}$ | 6 | -6 | 6 | -6 | -2 | 2 | 10 | -10 | 14 | -14 | 2 | -2 | -6 | 6 | -2 | 2 |
| $\chi_{64}$ | -18 | 18 | -18 | 18 | 6 | -6 | 14 | -14 | 10 | -10 | 6 | -6 | -2 | 2 | 2 | -2 |
| $\chi_{65}$ | -27 | 27 | -27 | 27 | 9 | -9 | -3 | 3 | -9 | 9 | 1 | -1 | 5 | -5 | 3 | -3 |
| $\chi_{66}$ | -27 | 27 | -27 | 27 | 9 | -9 | -3 | 3 | -9 | 9 | 1 | -1 | 5 | -5 | 3 | -3 |
| $\chi_{67}$ | 12 | -12 | 12 | -12 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 |
| $\chi_{68}$ | 12 | -12 | 12 | -12 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $2D$ | | | | | | | | $3A$ | | $3B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2R$ | $4M$ | $4N$ | $2S$ | $4O$ | $4P$ | $4Q$ | $4R$ | $3A$ | $6A$ | $3B$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_4$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_7$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_9$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{10}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -7 | -7 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{16}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{17}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 6 | 6 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{18}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -6 | -6 | -6 | -6 | -6 | -6 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10 | -10 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{23}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{27}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | 2 | -2 | 2 | 2 | -2 |
| $\chi_{31}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | -3 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | 6 | -6 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{34}$ | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 6 | -6 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{35}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 5 | -5 | 5 | -5 | -5 | 5 |
| $\chi_{36}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 5 | -5 | 5 | -5 | -5 | 5 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -7 | 7 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{38}$ | 4 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | 6 | -6 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | 6 | -6 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{41}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{42}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 6 | -6 | -3 | 3 | -3 | 3 | 3 | -3 |
| $\chi_{43}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 6 | -6 | -3 | 3 | -3 | 3 | 3 | -3 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -6 | 6 | -6 | 6 | 6 | -6 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -10 | 10 | -4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{48}$ | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -3 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | -9 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{52}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{53}$ | 6 | -6 | 6 | -6 | -2 | -2 | 2 | 2 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{54}$ | -6 | 6 | -6 | 6 | 2 | 2 | -2 | -2 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{55}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 0 | 0 | 18 | -18 | -6 | 6 | -2 | 2 |
| $\chi_{56}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 0 | 0 | 18 | -18 | -6 | 6 | -2 | 2 |
| $\chi_{57}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 0 | 0 | -9 | 9 | 3 | -3 | 1 | -1 |
| $\chi_{58}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 0 | 0 | -9 | 9 | 3 | -3 | 1 | -1 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 6 | -6 | 6 | -6 | -2 | -2 | 2 | 2 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{61}$ | -6 | 6 | -6 | 6 | 2 | 2 | -2 | -2 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | -9 | -3 | 3 | -1 | 1 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -18 | 18 | 6 | -6 | 2 | -2 |
| $\chi_{65}$ | 3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | -6 | 6 | -6 | 6 | 2 | 2 | -2 | -2 | 0 | 0 | -9 | 9 | 3 | -3 | 1 | -1 |
| $\chi_{68}$ | 6 | -6 | 6 | -6 | -2 | -2 | 2 | 2 | 0 | 0 | -9 | 9 | 3 | -3 | 1 | -1 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $3C$ | | | | $4A$ | | | | | | $4B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $3C$ | $6G$ | $6H$ | $6I$ | $4S$ | $4T$ | $4U$ | $4V$ | $8A$ | $8B$ | $4W$ | $4X$ | $4Y$ | $4Z$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_4$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 |
| $\chi_5$ | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| $\chi_9$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 |
| $\chi_{10}$ | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 |
| $\chi_{13}$ | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 3 | 3 | 3 | 3 | -4 | -4 | -4 | -4 | -4 | -4 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | -3 | -3 | -3 | -3 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | -3 | -3 | -3 | -3 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 |
| $\chi_{20}$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| $\chi_{26}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{27}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{30}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{31}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 | -1 | 1 |
| $\chi_{32}$ | 3 | -3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 3 | -3 | 3 | -3 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | 3 | -3 | 3 | -3 |
| $\chi_{35}$ | -1 | 1 | -1 | 1 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | -1 | 1 | -1 | 1 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 |
| $\chi_{38}$ | 3 | -3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 3 | -3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 3 | -3 | 3 | -3 | -4 | 4 | -4 | 4 | -4 | 4 | -2 | 2 | -2 | 2 |
| $\chi_{41}$ | 3 | -3 | 3 | -3 | 4 | -4 | 4 | -4 | 4 | -4 | -2 | 2 | -2 | 2 |
| $\chi_{42}$ | -3 | 3 | -3 | 3 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{43}$ | -3 | 3 | -3 | 3 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 |
| $\chi_{45}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | 3 | -3 | 3 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | 3 | -3 | -1 | 1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | -3 | -1 | 1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | -1 | 1 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | -3 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | 3 | -3 | -1 | 1 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 4 | -4 | 6 | -6 | -2 | 2 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 6 | -6 | -2 | 2 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -6 | 6 | 2 | -2 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -6 | 6 | 2 | -2 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | 1 | -1 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $4C$ | | | | | | | | $4D$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AA$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $8C$ | $8D$ | $4AG$ | $8E$ | $8F$ | $4AH$ | $4AI$ | $8G$ | $8H$ | $4AJ$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_4$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_6$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_8$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_9$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{10}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{24}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{26}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{27}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{28}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{31}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{32}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{33}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{34}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{35}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{43}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{49}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{51}$ | 5 | -5 | 3 | -3 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{52}$ | -5 | 5 | -3 | 3 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{53}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 5 | -5 | 3 | -3 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{56}$ | -5 | 5 | -3 | 3 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{57}$ | 3 | -3 | 5 | -5 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{58}$ | -3 | 3 | -5 | 5 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{65}$ | 3 | -3 | 5 | -5 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{66}$ | -3 | 3 | -5 | 5 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{67}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $5A$ | | | | | | $6A$ | | $6B$ | | | | $6C$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $5A$ | $10A$ | $10B$ | $10C$ | $10D$ | $10E$ | $6J$ | $6K$ | $6L$ | $6M$ | $12A$ | $12B$ | $6N$ | $12C$ | $12D$ | $6O$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_6$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| $\chi_{21}$ | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{27}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{28}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 2 | 2 | -2 | -2 |
| $\chi_{29}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -2 | -2 | 2 | 2 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | 2 | -2 | 2 | -1 | -1 | 1 | 1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | 2 | -2 | 2 | 1 | 1 | -1 | -1 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -1 | 1 | -1 | 1 | 2 | 2 | -2 | -2 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -1 | 1 | -1 | 1 | -2 | -2 | 2 | 2 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | 1 | -1 | 1 | 1 | -1 | 2 | -2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | -1 | 1 | -1 | 1 | 1 | -1 | 2 | -2 | 2 | -2 | 2 | -2 | -1 | -1 | 1 | 1 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 |
| $\chi_{46}$ | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $6D$ | | | | $6E$ | | | | | | | | $6F$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6P$ | $6Q$ | $6R$ | $6S$ | $6T$ | $6U$ | $12E$ | $12F$ | $12G$ | $12H$ | $6V$ | $6W$ | $6X$ | $6Y$ | $12I$ | $12J$ | $12K$ | $12L$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_7$ | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_9$ | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | -1 | -1 | -1 | -1 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{16}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{27}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{28}$ | -2 | 2 | -2 | 2 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{29}$ | -2 | 2 | -2 | 2 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{31}$ | 1 | -1 | 1 | -1 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 1 | -1 | 1 | -1 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 2 | -2 | 2 | -2 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{34}$ | 2 | -2 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{35}$ | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{36}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{37}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{38}$ | -1 | 1 | -1 | 1 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | -1 | 1 | -1 | 1 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{41}$ | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{42}$ | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{43}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | | | $6G$ | | | | $8A$ | | | $9A$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | $6Z$ | $6AA$ | $12M$ | $12N$ | $8I$ | $8J$ | $8K$ | $8L$ | $9A$ | $18A$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_3$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_4$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_7$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_{10}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{11}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{27}$ | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{31}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{32}$ | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{35}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{36}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{38}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{43}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | | | $10A$ | | | $12A$ | | | $12B$ | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $10F$ | $10G$ | $20A$ | $20B$ | $12O$ | $12P$ | $12Q$ | $24A$ | $24B$ | $12R$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_6$ | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_7$ | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{27}$ | -1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{28}$ | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{29}$ | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{39}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $1A$ | | | | | | $2A$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $4A$ | $4B$ | $4C$ | $4D$ | $2H$ | $2I$ |
| $\chi_{69}$ | 27 | 27 | -5 | -5 | 3 | 3 | 15 | 15 | -5 | -5 | 3 | 3 | -1 | -1 |
| $\chi_{70}$ | 27 | 27 | -5 | -5 | 3 | 3 | -15 | -15 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{71}$ | 108 | 108 | -20 | -20 | 12 | 12 | 30 | 30 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{72}$ | 108 | 108 | -20 | -20 | 12 | 12 | -30 | -30 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{73}$ | 135 | 135 | -25 | -25 | 15 | 15 | 45 | 45 | -15 | -15 | 9 | 9 | -3 | -3 |
| $\chi_{74}$ | 135 | 135 | -25 | -25 | 15 | 15 | -45 | -45 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{75}$ | 135 | 135 | -25 | -25 | 15 | 15 | -15 | -15 | 5 | 5 | -3 | -3 | 1 | 1 |
| $\chi_{76}$ | 135 | 135 | -25 | -25 | 15 | 15 | 15 | 15 | -5 | -5 | 3 | 3 | -1 | -1 |
| $\chi_{77}$ | 162 | 162 | -30 | -30 | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 270 | 270 | -50 | -50 | 30 | 30 | -30 | -30 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{79}$ | 270 | 270 | -50 | -50 | 30 | 30 | 30 | 30 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{80}$ | 270 | 270 | -50 | -50 | 30 | 30 | 60 | 60 | -20 | -20 | 12 | 12 | -4 | -4 |
| $\chi_{81}$ | 270 | 270 | -50 | -50 | 30 | 30 | -60 | -60 | 20 | 20 | -12 | -12 | 4 | 4 |
| $\chi_{82}$ | 270 | 270 | -50 | -50 | 30 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 405 | 405 | -75 | -75 | 45 | 45 | -45 | -45 | 15 | 15 | -9 | -9 | 3 | 3 |
| $\chi_{84}$ | 405 | 405 | -75 | -75 | 45 | 45 | 45 | 45 | -15 | -15 | 9 | 9 | -3 | -3 |
| $\chi_{85}$ | 540 | 540 | -100 | -100 | 60 | 60 | -30 | -30 | 10 | 10 | -6 | -6 | 2 | 2 |
| $\chi_{86}$ | 540 | 540 | -100 | -100 | 60 | 60 | 30 | 30 | -10 | -10 | 6 | 6 | -2 | -2 |
| $\chi_{87}$ | 36 | -36 | -4 | 4 | -4 | 4 | 16 | -16 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{88}$ | 36 | -36 | -4 | 4 | -4 | 4 | -14 | 14 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{89}$ | 36 | -36 | -4 | 4 | -4 | 4 | 14 | -14 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{90}$ | 36 | -36 | -4 | 4 | -4 | 4 | -16 | 16 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{91}$ | 180 | -180 | -20 | 20 | -20 | 20 | -40 | 40 | -20 | 20 | -4 | 4 | -8 | 8 |
| $\chi_{92}$ | 180 | -180 | -20 | 20 | -20 | 20 | 50 | -50 | 10 | -10 | 14 | -14 | -2 | 2 |
| $\chi_{93}$ | 180 | -180 | -20 | 20 | -20 | 20 | -50 | 50 | -10 | 10 | -14 | 14 | 2 | -2 |
| $\chi_{94}$ | 180 | -180 | -20 | 20 | -20 | 20 | 40 | -40 | 20 | -20 | 4 | -4 | 8 | -8 |
| $\chi_{95}$ | 180 | -180 | -20 | 20 | -20 | 20 | -20 | 20 | 0 | 0 | -8 | 8 | 4 | -4 |
| $\chi_{96}$ | 180 | -180 | -20 | 20 | -20 | 20 | 10 | -10 | 10 | -10 | -2 | 2 | 6 | -6 |
| $\chi_{97}$ | 180 | -180 | -20 | 20 | -20 | 20 | -10 | 10 | -10 | 10 | 2 | -2 | -6 | 6 |
| $\chi_{98}$ | 180 | -180 | -20 | 20 | -20 | 20 | 20 | -20 | 0 | 0 | 8 | -8 | -4 | 4 |
| $\chi_{99}$ | 324 | -324 | -36 | 36 | -36 | 36 | -36 | 36 | -24 | 24 | 0 | 0 | -12 | 12 |
| $\chi_{100}$ | 324 | -324 | -36 | 36 | -36 | 36 | 54 | -54 | 6 | -6 | 18 | -18 | -6 | 6 |
| $\chi_{101}$ | 324 | -324 | -36 | 36 | -36 | 36 | -54 | 54 | -6 | 6 | -18 | 18 | 6 | -6 |
| $\chi_{102}$ | 324 | -324 | -36 | 36 | -36 | 36 | 36 | -36 | 24 | -24 | 0 | 0 | 12 | -12 |
| $\chi_{103}$ | 360 | -360 | -40 | 40 | -40 | 40 | -40 | 40 | 0 | 0 | -16 | 16 | 8 | -8 |
| $\chi_{104}$ | 360 | -360 | -40 | 40 | -40 | 40 | 20 | -20 | 20 | -20 | -4 | 4 | 12 | -12 |
| $\chi_{105}$ | 360 | -360 | -40 | 40 | -40 | 40 | -20 | 20 | -20 | 20 | 4 | -4 | -12 | 12 |
| $\chi_{106}$ | 360 | -360 | -40 | 40 | -40 | 40 | 40 | -40 | 0 | 0 | 16 | -16 | -8 | 8 |
| $\chi_{107}$ | 576 | -576 | -64 | 64 | -64 | 64 | 16 | -16 | -16 | 16 | 16 | -16 | -16 | 16 |
| $\chi_{108}$ | 576 | -576 | -64 | 64 | -64 | 64 | -16 | 16 | 16 | -16 | -16 | 16 | 16 | -16 |
| $\chi_{109}$ | 36 | 36 | 4 | 4 | -4 | -4 | 16 | 16 | 4 | 4 | -4 | -4 | 0 | 0 |
| $\chi_{110}$ | 36 | 36 | 4 | 4 | -4 | -4 | -14 | -14 | -6 | -6 | 2 | 2 | 2 | 2 |
| $\chi_{111}$ | 36 | 36 | 4 | 4 | -4 | -4 | 14 | 14 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{112}$ | 36 | 36 | 4 | 4 | -4 | -4 | -16 | -16 | -4 | -4 | 4 | 4 | 0 | 0 |
| $\chi_{113}$ | 180 | 180 | 20 | 20 | -20 | -20 | -40 | -40 | -20 | -20 | 4 | 4 | 8 | 8 |
| $\chi_{114}$ | 180 | 180 | 20 | 20 | -20 | -20 | 50 | 50 | 10 | 10 | -14 | -14 | 2 | 2 |
| $\chi_{115}$ | 180 | 180 | 20 | 20 | -20 | -20 | -50 | -50 | -10 | -10 | 14 | 14 | -2 | -2 |
| $\chi_{116}$ | 180 | 180 | 20 | 20 | -20 | -20 | 40 | 40 | 20 | 20 | -4 | -4 | -8 | -8 |
| $\chi_{117}$ | 180 | 180 | 20 | 20 | -20 | -20 | -20 | -20 | 0 | 0 | 8 | 8 | -4 | -4 |
| $\chi_{118}$ | 180 | 180 | 20 | 20 | -20 | -20 | 10 | 10 | 10 | 10 | 2 | 2 | -6 | -6 |
| $\chi_{119}$ | 180 | 180 | 20 | 20 | -20 | -20 | -10 | -10 | -10 | -10 | -2 | -2 | 6 | 6 |
| $\chi_{120}$ | 180 | 180 | 20 | 20 | -20 | -20 | 20 | 20 | 0 | 0 | -8 | -8 | 4 | 4 |
| $\chi_{121}$ | 324 | 324 | 36 | 36 | -36 | -36 | -36 | -36 | -24 | -24 | 0 | 0 | 12 | 12 |
| $\chi_{122}$ | 324 | 324 | 36 | 36 | -36 | -36 | 54 | 54 | 6 | 6 | -18 | -18 | 6 | 6 |
| $\chi_{123}$ | 324 | 324 | 36 | 36 | -36 | -36 | -54 | -54 | -6 | -6 | 18 | 18 | -6 | -6 |
| $\chi_{124}$ | 324 | 324 | 36 | 36 | -36 | -36 | 36 | 36 | 24 | 24 | 0 | 0 | -12 | -12 |
| $\chi_{125}$ | 360 | 360 | 40 | 40 | -40 | -40 | -40 | -40 | 0 | 0 | 16 | 16 | -8 | -8 |
| $\chi_{126}$ | 360 | 360 | 40 | 40 | -40 | -40 | 20 | 20 | 20 | 20 | 4 | 4 | -12 | -12 |
| $\chi_{127}$ | 360 | 360 | 40 | 40 | -40 | -40 | -20 | -20 | -20 | -20 | -4 | -4 | 12 | 12 |
| $\chi_{128}$ | 360 | 360 | 40 | 40 | -40 | -40 | 40 | 40 | 0 | 0 | -16 | -16 | 8 | 8 |
| $\chi_{129}$ | 576 | 576 | 64 | 64 | -64 | -64 | 16 | 16 | -16 | -16 | -16 | -16 | 16 | 16 |
| $\chi_{130}$ | 576 | 576 | 64 | 64 | -64 | -64 | -16 | -16 | 16 | 16 | 16 | 16 | -16 | -16 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $2B$ | | | | | | $2C$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2J$ | $2K$ | $2L$ | $2M$ | $4E$ | $4F$ | $2N$ | $2O$ | $4G$ | $4H$ | $4I$ | $4J$ | $2P$ | $2Q$ | $4K$ | $4L$ |
| $\chi_{69}$ | 3 | 3 | 3 | 3 | -1 | -1 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{70}$ | 3 | 3 | 3 | 3 | -1 | -1 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{71}$ | 12 | 12 | 12 | 12 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{72}$ | 12 | 12 | 12 | 12 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{73}$ | -9 | -9 | -9 | -9 | 3 | 3 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{74}$ | -9 | -9 | -9 | -9 | 3 | 3 | 7 | 7 | -5 | -5 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{75}$ | 15 | 15 | 15 | 15 | -5 | -5 | 11 | 11 | -1 | -1 | 7 | 7 | 3 | 3 | -5 | -5 |
| $\chi_{76}$ | 15 | 15 | 15 | 15 | -5 | -5 | 11 | 11 | -1 | -1 | 7 | 7 | 3 | 3 | -5 | -5 |
| $\chi_{77}$ | 18 | 18 | 18 | 18 | -6 | -6 | -6 | -6 | 18 | 18 | 2 | 2 | 10 | 10 | -6 | -6 |
| $\chi_{78}$ | 6 | 6 | 6 | 6 | -2 | -2 | -14 | -14 | 10 | 10 | -6 | -6 | 2 | 2 | 2 | 2 |
| $\chi_{79}$ | 6 | 6 | 6 | 6 | -2 | -2 | -14 | -14 | 10 | 10 | -6 | -6 | 2 | 2 | 2 | 2 |
| $\chi_{80}$ | 6 | 6 | 6 | 6 | -2 | -2 | 10 | 10 | -14 | -14 | 2 | 2 | -6 | -6 | 2 | 2 |
| $\chi_{81}$ | 6 | 6 | 6 | 6 | -2 | -2 | 10 | 10 | -14 | -14 | 2 | 2 | -6 | -6 | 2 | 2 |
| $\chi_{82}$ | -18 | -18 | -18 | -18 | 6 | 6 | 14 | 14 | -10 | -10 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{83}$ | -27 | -27 | -27 | -27 | 9 | 9 | -3 | -3 | 9 | 9 | 1 | 1 | 5 | 5 | -3 | -3 |
| $\chi_{84}$ | -27 | -27 | -27 | -27 | 9 | 9 | -3 | -3 | 9 | 9 | 1 | 1 | 5 | 5 | -3 | -3 |
| $\chi_{85}$ | 12 | 12 | 12 | 12 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{86}$ | 12 | 12 | 12 | 12 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{87}$ | 12 | -12 | -4 | 4 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -12 | 12 | 4 | -4 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{89}$ | -12 | 12 | 4 | -4 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{90}$ | 12 | -12 | -4 | 4 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 12 | -12 | -4 | 4 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{92}$ | -12 | 12 | 4 | -4 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{93}$ | -12 | 12 | 4 | -4 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{94}$ | 12 | -12 | -4 | 4 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{95}$ | -36 | 36 | 12 | -12 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 36 | -36 | -12 | 12 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{97}$ | 36 | -36 | -12 | 12 | 0 | 0 | 4 | -4 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{98}$ | -36 | 36 | 12 | -12 | 0 | 0 | 8 | -8 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -36 | 36 | 12 | -12 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{100}$ | 36 | -36 | -12 | 12 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{101}$ | 36 | -36 | -12 | 12 | 0 | 0 | 12 | -12 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 |
| $\chi_{102}$ | -36 | 36 | 12 | -12 | 0 | 0 | 0 | 0 | -12 | 12 | 4 | -4 | -8 | 8 | 0 | 0 |
| $\chi_{103}$ | -24 | 24 | 8 | -8 | 0 | 0 | -8 | 8 | 16 | -16 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{104}$ | 24 | -24 | -8 | 8 | 0 | 0 | -16 | 16 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 24 | -24 | -8 | 8 | 0 | 0 | -16 | 16 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | -24 | 24 | 8 | -8 | 0 | 0 | -8 | 8 | 16 | -16 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 12 | 12 | -4 | -4 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | -12 | -12 | 4 | 4 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{111}$ | -12 | -12 | 4 | 4 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{112}$ | 12 | 12 | -4 | -4 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 12 | 12 | -4 | -4 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{114}$ | -12 | -12 | 4 | 4 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{115}$ | -12 | -12 | 4 | 4 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{116}$ | 12 | 12 | -4 | -4 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{117}$ | -36 | -36 | 12 | 12 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 36 | 36 | -12 | -12 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{119}$ | 36 | 36 | -12 | -12 | 0 | 0 | 4 | 4 | 8 | 8 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{120}$ | -36 | -36 | 12 | 12 | 0 | 0 | 8 | 8 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | -36 | -36 | 12 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{122}$ | 36 | 36 | -12 | -12 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{123}$ | 36 | 36 | -12 | -12 | 0 | 0 | 12 | 12 | 0 | 0 | -8 | -8 | 4 | 4 | 0 | 0 |
| $\chi_{124}$ | -36 | -36 | 12 | 12 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -8 | -8 | 0 | 0 |
| $\chi_{125}$ | -24 | -24 | 8 | 8 | 0 | 0 | -8 | -8 | -16 | -16 | 0 | 0 | 8 | 8 | 0 | 0 |
| $\chi_{126}$ | 24 | 24 | -8 | -8 | 0 | 0 | -16 | -16 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 24 | 24 | -8 | -8 | 0 | 0 | -16 | -16 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | -24 | -24 | 8 | 8 | 0 | 0 | -8 | -8 | -16 | -16 | 0 | 0 | 8 | 8 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | $2D$ | | | | $3A$ | | | | $3B$ | | | |
| | $2R$ | $4M$ | $4N$ | $2S$ | $4O$ | $4P$ | $4Q$ | $4R$ | $3A$ | $6A$ | $3B$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ |
| $\chi_{69}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{70}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{71}$ | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{72}$ | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{73}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 0 | 0 | 18 | 18 | -6 | -6 | 2 | 2 |
| $\chi_{74}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 0 | 0 | 18 | 18 | -6 | -6 | 2 | 2 |
| $\chi_{75}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 0 | 0 | -9 | -9 | 3 | 3 | -1 | -1 |
| $\chi_{76}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 0 | 0 | -9 | -9 | 3 | 3 | -1 | -1 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{79}$ | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | -3 | -3 | 1 | 1 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -18 | -18 | 6 | 6 | -2 | -2 |
| $\chi_{83}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 | 0 | 0 | -9 | -9 | 3 | 3 | -1 | -1 |
| $\chi_{86}$ | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 | 0 | 0 | -9 | -9 | 3 | 3 | -1 | -1 |
| $\chi_{87}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{88}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{89}$ | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{90}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{91}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 4 | -4 |
| $\chi_{92}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 12 | -12 | 4 | -4 | 4 | -4 |
| $\chi_{93}$ | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 12 | -12 | 4 | -4 | 4 | -4 |
| $\chi_{94}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 4 | -4 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{96}$ | -6 | 6 | 6 | -6 | -2 | 2 | -2 | 2 | 0 | 0 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{97}$ | 6 | -6 | -6 | 6 | 2 | -2 | 2 | -2 | 0 | 0 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 6 | -6 | -6 | 6 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -6 | 6 | 6 | -6 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{104}$ | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{105}$ | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{106}$ | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | 2 | -2 | 2 | -2 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | 12 | -4 | 4 | -4 | 4 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | 12 | -4 | 4 | -4 | 4 |
| $\chi_{109}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{110}$ | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{111}$ | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{112}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{113}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -4 | -4 |
| $\chi_{114}$ | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 12 | 12 | 4 | 4 | -4 | -4 |
| $\chi_{115}$ | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 12 | 12 | 4 | 4 | -4 | -4 |
| $\chi_{116}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 | 4 | 4 | -4 | -4 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -6 | -6 | -2 | -2 | 2 | 2 |
| $\chi_{118}$ | -6 | -6 | 6 | 6 | -2 | 2 | 2 | -2 | 0 | 0 | -6 | -6 | -2 | -2 | 2 | 2 |
| $\chi_{119}$ | 6 | 6 | -6 | -6 | 2 | -2 | -2 | 2 | 0 | 0 | -6 | -6 | -2 | -2 | 2 | 2 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | -6 | -6 | -2 | -2 | 2 | 2 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 6 | 6 | -6 | -6 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | -6 | -6 | 6 | 6 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{126}$ | 4 | 4 | -4 | -4 | -4 | 4 | 4 | -4 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{127}$ | -4 | -4 | 4 | 4 | 4 | -4 | -4 | 4 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{128}$ | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 2 | 2 | -2 | -2 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | -12 | -4 | -4 | 4 | 4 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | -12 | -4 | -4 | 4 | 4 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $3C$ | | | | $4A$ | | | | | | $4B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $3C$ | $6G$ | $6H$ | $6I$ | $4S$ | $4T$ | $4U$ | $4V$ | $8A$ | $8B$ | $4W$ | $4X$ | $4Y$ | $4Z$ |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 3 | 3 | -1 | -1 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 3 | 3 | -1 | -1 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -1 | -1 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 3 | 3 | -1 | -1 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 3 | 3 | -1 | -1 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | 4 | 4 | 6 | 6 | -2 | -2 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | -4 | -4 | 6 | 6 | -2 | -2 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | -6 | -6 | 2 | 2 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | -6 | -6 | 2 | 2 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 1 | 1 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 3 | -3 | -1 | 1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 3 | -3 | -1 | 1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 3 | -3 | -1 | 1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 3 | -3 | -1 | 1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | -3 | 3 | 1 | -1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | -3 | 3 | 1 | -1 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | -3 | 3 | 1 | -1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | -3 | 3 | 1 | -1 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 6 | -6 | -2 | 2 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 6 | -6 | -2 | 2 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 6 | -6 | -2 | 2 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 6 | -6 | -2 | 2 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 3 | -3 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -6 | 6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 3 | 3 | -1 | -1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 3 | 3 | -1 | -1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 3 | 3 | -1 | -1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 3 | 3 | -1 | -1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | -3 | -3 | 1 | 1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | -3 | -3 | 1 | 1 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | -3 | -3 | 1 | 1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | -3 | -3 | 1 | 1 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 6 | 6 | -2 | -2 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 6 | 6 | -2 | -2 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 6 | 6 | -2 | -2 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 6 | 6 | -2 | -2 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $4C$ | | | | | | | | $4D$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AA$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $8C$ | $8D$ | $4AG$ | $8E$ | $8F$ | $4AH$ | $4AI$ | $8G$ | $8H$ | $4AJ$ |
| $\chi_{69}$ | 5 | 5 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{70}$ | -5 | -5 | 3 | 3 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{71}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 5 | 5 | -3 | -3 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{74}$ | -5 | -5 | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{75}$ | 3 | 3 | -5 | -5 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{76}$ | -3 | -3 | 5 | 5 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{83}$ | 3 | 3 | -5 | -5 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{84}$ | -3 | -3 | 5 | 5 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{85}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{89}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{90}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{93}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{94}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{97}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{98}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{101}$ | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{102}$ | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{110}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{111}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{112}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{113}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{114}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{115}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{116}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{117}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{118}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{119}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{120}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{121}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{122}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{123}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{124}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | | | | | 5A | | | 6A | | | | 6B | | | | 6C | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5A | 10A | 10B | 10C | 10D | 10E | 6J | 6K | 6L | 6M | 12A | 12B | 6N | 12C | 12D | 6O |
| $\chi_{69}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{88}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{89}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{90}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{99}$ | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{107}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{108}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{109}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{110}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{111}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{112}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{121}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{129}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{130}$ | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | $6D$ | | | | $6E$ | | | | | | | | $6F$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6P$ | $6Q$ | $6R$ | $6S$ | $6T$ | $6U$ | $12E$ | $12F$ | $12G$ | $12H$ | $6V$ | $6W$ | $6X$ | $6Y$ | $12I$ | $12J$ | $12K$ | $12L$ |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{87}$ | 3 | -3 | -1 | 1 | 4 | -4 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{88}$ | -3 | 3 | 1 | -1 | -2 | 2 | 4 | -4 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{89}$ | -3 | 3 | 1 | -1 | 2 | -2 | -4 | 4 | 0 | 0 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{90}$ | 3 | -3 | -1 | 1 | -4 | 4 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{91}$ | 3 | -3 | -1 | 1 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | -3 | 3 | 1 | -1 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | -3 | 3 | 1 | -1 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 3 | -3 | -1 | 1 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | -2 | 2 | 4 | -4 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 4 | -4 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | -4 | 4 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 2 | -2 | -4 | 4 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 3 | -3 | -1 | 1 | 2 | -2 | -4 | 4 | 0 | 0 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{104}$ | -3 | 3 | 1 | -1 | -4 | 4 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{105}$ | -3 | 3 | 1 | -1 | 4 | -4 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{106}$ | 3 | -3 | -1 | 1 | -2 | 2 | 4 | -4 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 3 | 3 | -1 | -1 | 4 | 4 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{110}$ | -3 | -3 | 1 | 1 | -2 | -2 | -4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{111}$ | -3 | -3 | 1 | 1 | 2 | 2 | 4 | 4 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{112}$ | 3 | 3 | -1 | -1 | -4 | -4 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{113}$ | 3 | 3 | -1 | -1 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | -3 | -3 | 1 | 1 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | -3 | -3 | 1 | 1 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 3 | 3 | -1 | -1 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | -2 | -2 | -4 | -4 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 4 | 4 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | -4 | -4 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 4 | 0 | 0 | -2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 3 | 3 | -1 | -1 | 2 | 2 | 4 | 4 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{126}$ | -3 | -3 | 1 | 1 | -4 | -4 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{127}$ | -3 | -3 | 1 | 1 | 4 | 4 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{128}$ | 3 | 3 | -1 | -1 | -2 | -2 | -4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | | | $6G$ | | | | $8A$ | | | $9A$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | $6Z$ | $6AA$ | $12M$ | $12N$ | $8I$ | $8J$ | $8K$ | $8L$ | $9A$ | $18A$ |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.16 : Character Table of $2^7 : O_6^-(2)$(continued)

| | | | $10A$ | | | $12A$ | | | $12B$ | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $10F$ | $10G$ | $20A$ | $20B$ | $12O$ | $12P$ | $12Q$ | $24A$ | $24B$ | $12R$ |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{87}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

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### 7.2.6 The Fusion of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$

We use the results of Subsection 7.2.1 to compute the power maps of the elements of $2^7 : O_6^-(2)$ which are listed in Table 7.17 below.

Table 7.17: The power maps of the elements of $2^7 : O_6^-(2)$

| $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | 2 | 3 | 5 | 7 | $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | | | | $2A$ | $2F$ | $1A$ | | | |
| | $2A$ | $1A$ | | | | | $2G$ | $1A$ | | | |
| | $2B$ | $1A$ | | | | | $4A$ | $2D$ | | | |
| | $2C$ | $1A$ | | | | | $4B$ | $2D$ | | | |
| | $2D$ | $1A$ | | | | | $4C$ | $2D$ | | | |
| | $2E$ | $1A$ | | | | | $4D$ | $2D$ | | | |
| | | | | | | | $2H$ | $1A$ | | | |
| | | | | | | | $2I$ | $1A$ | | | |
| $2B$ | $2J$ | $1A$ | | | | $2C$ | $2N$ | $1A$ | | | |
| | $2K$ | $1A$ | | | | | $2O$ | $1A$ | | | |
| | $2L$ | $1A$ | | | | | $4G$ | $2C$ | | | |
| | $2M$ | $1A$ | | | | | $4H$ | $2C$ | | | |
| | $4E$ | $2C$ | | | | | $4I$ | $2C$ | | | |
| | $4F$ | $2C$ | | | | | $4J$ | $2C$ | | | |
| | | | | | | | $2P$ | $1A$ | | | |
| | | | | | | | $2Q$ | $1A$ | | | |
| | | | | | | | $4K$ | $2D$ | | | |
| | | | | | | | $4L$ | $2D$ | | | |
| $2D$ | $2R$ | $1A$ | | | | $3A$ | $3A$ | | $1A$ | | |
| | $4M$ | $2D$ | | | | | $6A$ | $3A$ | $2A$ | | |
| | $4N$ | $2D$ | | | | | | | | | |
| | $2S$ | $1A$ | | | | | | | | | |
| | $4O$ | $2C$ | | | | | | | | | |
| | $4P$ | $2D$ | | | | | | | | | |
| | $4Q$ | $2D$ | | | | | | | | | |
| | $4R$ | $2C$ | | | | | | | | | |
| $3B$ | $3B$ | | $1A$ | | | $3C$ | $3C$ | | $1A$ | | |
| | $6B$ | $3B$ | $2A$ | | | | $6G$ | $3C$ | $2A$ | | |
| | $6C$ | $3B$ | $2D$ | | | | $6H$ | $3C$ | $2D$ | | |
| | $6D$ | $3B$ | $2E$ | | | | $6I$ | $3C$ | $2E$ | | |
| | $6E$ | $3B$ | $2B$ | | | | | | | | |
| | $6F$ | $3B$ | $2C$ | | | | | | | | |
| $4A$ | $4S$ | $2N$ | | | | $4B$ | $4W$ | $2J$ | | | |
| | $4T$ | $2N$ | | | | | $4X$ | $2J$ | | | |
| | $4U$ | $2N$ | | | | | $4Y$ | $2L$ | | | |
| | $4V$ | $2N$ | | | | | $4Z$ | $2L$ | | | |
| | $8A$ | $4G$ | | | | | | | | | |
| | $8B$ | $4G$ | | | | | | | | | |
| $4C$ | $4AA$ | $2N$ | | | | $4D$ | $4AG$ | $2N$ | | | |
| | $4AB$ | $2N$ | | | | | $8E$ | $4G$ | | | |
| | $4AC$ | $2N$ | | | | | $8F$ | $4G$ | | | |
| | $4AD$ | $2N$ | | | | | $4AH$ | $2P$ | | | |
| | $4AE$ | $2N$ | | | | | $4AI$ | $2P$ | | | |
| | $4AF$ | $2N$ | | | | | $8G$ | $4J$ | | | |
| | $8C$ | $4J$ | | | | | $8H$ | $4J$ | | | |
| | $8D$ | $4J$ | | | | | $4AJ$ | $2N$ | | | |
| $5A$ | $5A$ | | | $1A$ | | $6A$ | $6J$ | $3A$ | $2G$ | | |
| | 10A | $5A$ | | 2A | | | $6K$ | $3A$ | $2K$ | | |
| | $10B$ | $5A$ | | $2E$ | | | | | | | |
| | $10C$ | $5A$ | | $2D$ | | | | | | | |
| | $10D$ | $5A$ | | $2B$ | | | | | | | |
| | $10E$ | $5A$ | | 2C | | | | | | | |
| $6B$ | $6L$ | $3B$ | $2J$ | | | $6C$ | $6N$ | $3C$ | $2F$ | | |
| | $6M$ | $3B$ | $2K$ | | | | $12C$ | $6H$ | $4D$ | | |
| | $12A$ | $6F$ | $4E$ | | | | $12D$ | $6H$ | $4C$ | | |
| | $12B$ | $6F$ | $4F$ | | | | $6O$ | $3C$ | $2G$ | | |
| $6D$ | $6P$ | $3C$ | $2J$ | | | $6E$ | $6T$ | $3B$ | $2F$ | | |
| | $6Q$ | $3C$ | $2K$ | | | | $6U$ | $3B$ | $2G$ | | |
| | $6R$ | $3C$ | $2L$ | | | | $12E$ | $6C$ | $4C$ | | |
| | $6S$ | $3C$ | $2M$ | | | | $12F$ | $6C$ | $4D$ | | |
| | | | | | | | $12G$ | $6C$ | $4A$ | | |
| | | | | | | | $12H$ | $6C$ | $4B$ | | |
| | | | | | | | $6V$ | $3B$ | $2I$ | | |
| | | | | | | | $6W$ | $3B$ | $2H$ | | |

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Table 7.17 : The power maps of the elements of $2^7 : O_6^-(2)$(continued)

| $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | 2 | 3 | 5 | 7 | $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $6F$ | $6X$ | $3B$ | $2N$ | | | $6G$ | $6Z$ | $3C$ | $2R$ | | |
| | $6Y$ | $3B$ | $2O$ | | | | $12M$ | $6H$ | $4N$ | | |
| | $12I$ | $6F$ | $4G$ | | | | $6AA$ | $3C$ | $2S$ | | |
| | $12J$ | $6F$ | $4H$ | | | | $12N$ | $6H$ | $4M$ | | |
| | $12K$ | $6C$ | $4K$ | | | | | | | | |
| | $12L$ | $6C$ | $4L$ | | | | | | | | |
| $8A$ | $8I$ | $4W$ | | | | $9A$ | $9A$ | | $3A$ | | |
| | $8J$ | $4W$ | | | | | $18A$ | | $6A$ | | |
| | $8K$ | $4Y$ | | | | | | | | | |
| | $8L$ | $4Y$ | | | | | | | | | |
| $10A$ | $10F$ | $5A$ | | $2F$ | | $12A$ | $12O$ | $6J$ | $4W$ | | |
| | $10G$ | $5A$ | | $2G$ | | | $12P$ | $6J$ | $4X$ | | |
| | $20A$ | $10C$ | | $4B$ | | | | | | | |
| | $20B$ | $10C$ | | $4A$ | | | | | | | |
| $12B$ | $12Q$ | $6X$ | $4S$ | | | | | | | | |
| | $24A$ | $12I$ | $8B$ | | | | | | | | |
| | $24B$ | $12I$ | $8A$ | | | | | | | | |
| | $12R$ | $6X$ | $4T$ | | | | | | | | |

Let $\chi(2^7 : Sp_6(2)|2^7 : O_6^-(2))$ be the permutation character of degree 28 of $2^7 : Sp_6(2)$ acting on $2^7 : O_6^-(2)$. We obtain that $\chi(2^7 : Sp_6(2)|2^7 : O_6^-(2)) = 1a + 27a$. We are able to obtain the partial fusion of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$ by using the information provided by the conjugacy classes of the elements of $2^7 : O_6^-(2)$ and $2^7 : Sp_6(2)$ , their power maps , together with the permutation character of $2^7 : Sp_6(2)$ of the degree 28 and the fusion map of $O_6^-(2)$ into $Sp_6(2)$. We used the technique of set intersections for characters to restrict $63a$, $63b$ , $36a$ , $36b$, $28a$ , $28b \in Irr(2^7 : Sp_6(2))$ to $2^7 : O_6^-(2)$ to determine fully the fusion of the classes of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$ . We refer the reader for detailed information regarding the above set intersections technique to Moori [31], Mpono [35], Moori and Mpono [34], Ali [1] and Moori and Ali [2].

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Let $\zeta$ be the character afforded by the regular representation of $S_8$. We obtain that $\zeta = \Sigma_{i=1}^{25}\alpha_i\Phi_i$, where $\Phi_i \in Irr(O_6^-(2))$ and $\alpha_i = deg(\Phi_i)$.Then $\zeta$ can be regarded as a character of $2^7 : O_6^-(2)$ which contains $2^7$ in its kernel such that

$$\zeta(x) = \begin{cases} |O_6^-(2)| & \text{if } x \in 2^7 \\ 0 & \text{otherwise} \end{cases}$$

If $\phi$ is a character of $2^7 : Sp_6(2)$ than we have that

$$\begin{aligned} < \zeta, \phi >_{2^7:O_6^-(2)} = & \frac{1}{|2^7 : O_6^-(2)|}\{\zeta(1A)\phi(1A) + \zeta(2A)\phi(2A) + 27\zeta(2B)\phi(2B) + 27\zeta(2C)\phi(2C) + \\ & 36\zeta(2D)\phi(2D) + 36\zeta(2E)\phi(2E)\} \\ = & \frac{1}{|2^7 : O_6^-(2)|}|O_6^-(2)|(\phi(1A) + \phi(2A) + 27\phi(2B) + 27\phi(2C) + 36\phi(2D) + 36\phi(2E))\} \\ = & \frac{1}{128}\{\phi(1A) + \phi(2A) + 27\phi(2B) + 27\phi(2C) + 36\phi(2D) + 36\phi(2E)\} \\ = & < \phi \downarrow 2^7, 1_{2^7} > \end{aligned}$$

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Here $1_{2^7}$ is the identity character of $2^7$ and $\phi \downarrow 2^7$ is the restriction of $\phi$ to $2^7$.We obtain that

$$\phi \downarrow 2^7 = a_1\theta_1 + a_2\theta_2 + a_3\theta_3 + a_4\theta_4 + a_5\theta_5 + a_6\theta_6,$$

where $a_i \in \mathbb{N} \cup 0$ and $\theta_i$ are the sums of the irreducible characters of $2^7$ which are in the same orbit under the action of $O_6^-(2)$ on $Irr(2^7)$, for $i \in \{1, 2, 3, 4\}$. Let $\varphi_j \in Irr(2^7)$ , where $j \in \{1, 2, 3, ..., 130\}$. Then we obtain that

$$\begin{aligned}
\theta_1 &= \varphi_1 \quad , \quad deg(\theta_1) = 1 \\
\theta_2 &= \varphi_2 \quad , \quad deg(\theta_2) = 1 \\
\theta_3 &= \sum_{j=3}^{30} \varphi_j \ , \quad deg(\theta_3) = 27 \\
\theta_4 &= \sum_{j=31}^{58} \varphi_j \ , \quad deg(\theta_4) = 27 \\
\theta_5 &= \sum_{j=59}^{93} \varphi_j \ , \quad deg(\theta_5) = 36 \\
\theta_6 &= \sum_{j=94}^{128} \varphi_j \ , \quad deg(\theta_6) = 36
\end{aligned}$$

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Hence

$$\phi \downarrow 2^7 = a_1\varphi_1 + a_2\varphi_2 + a_3 \sum_{j=3}^{29} \varphi_j + a_4 \sum_{j=30}^{56} + a_5 \sum_{j=57}^{92} \varphi_j + a_6 \sum_{j=93}^{128} \varphi_j,$$

and therefore

$\langle \phi \downarrow 2^7, \phi \downarrow 2^7 \rangle = a_1^2 + a_2^2 + 27a_3^2 + 27a_4^2 + 36a_5^2 + 36a_5^2$

$= \frac{1}{128}\{\phi(1A)\phi(1A) + \phi(2A)\phi(2A) + 27\phi(2B)\phi(2B) + 27\phi(2C)\phi(2C) + 36\phi(2D)\phi(2D) + 36\phi(2E)\phi(2E)\}$, where $a_1 = < \zeta, \phi >_{2^7:O_6^-(2)}$

We apply the above results to some of the irreducible characters of $2^7 : Sp_6(2)$, which in this case are $\phi_1 = 28a$, $\phi_2 = 28b$, $\phi_3 = 36a$, $\phi_4 = 36b$, $\phi_5 = 63a$ and $\phi_6 = 63b$ . Their respective degrees are 28, 28, 36, 36, 63 and 63. For $\phi_1$ we calculate that

$$< \phi \downarrow 2^7, 1_{2^7} >= \frac{1}{128}\left[28 + (-28) + 27(4) + 27(-4) + 36(4) + 36(-4)\right] = 0$$

Now $a_1 + a_2 + 27a_3 + 27a_4 + 36a_5 + 36a_6 = 36$ , since $deg\phi_3 = 28$. Since $a_1 = 0$ , we must have either $a_2 = 1$ , $a_4 = a_5 = a_6 = 0$ and $a_3 = 1$ or $a_2 = 1$ , $a_3 = a_5 = a_6 = 0$ and $a_4 = 1$. Note that $2^7 : O_6^-(2)$ does not have irreducible characters of degree 28 or 8. We obtain that $(\phi_1) \downarrow 2^7 : O_6^-(2) = \chi_{26} + \chi_{51}$ if the partial fusion of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$ is taken into consideration. Similarly for $\phi_2$, $\phi_3$, $\phi_4$, $\phi_5$ and $\phi_6$ we obtain that

$$(\phi_2) \downarrow 2^7 : O_6^-(2) = \chi_{27} + \chi_{52}$$
$$(\phi_3) \downarrow 2^7 : O_6^-(2) = \chi_{87}$$
$$(\phi_4) \downarrow 2^7 : O_6^-(2) = \chi_{90}$$
$$(\phi_5) \downarrow 2^7 : O_6^-(2) = \chi_{69} + \chi_{109}$$
$$(\phi_6) \downarrow 2^7 : O_6^-(2) = \chi_{70} + \chi_{110}$$

By making use of the values of $\phi_1$, $\phi_2$, $\phi_3$, $\phi_4$, $\phi_5$ and $\phi_6$ on the classes of $2^7 : Sp_6(2)$ and the values of $(\phi_1) \downarrow 2^7 : O_6^-(2)$, $(\phi_2) \downarrow 2^7 : O_6^-(2)$, $(\phi_3) \downarrow 2^7 : O_6^-(2)$, $(\phi_4) \downarrow 2^7 : O_6^-(2)$, $(\phi_5) \downarrow 2^7 : O_6^-(2)$ and $(\phi_6) \downarrow 2^7 : O_6^-(2)$ on the classes of $2^7 : O_6^-(2)$ together with the partial fusion , the complete fusion map of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$ is given in the Table 7.18.

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Table 7.18: Fusion of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$

| $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | $1A$ | $2A$ | $2F$ | | $2D$ |
| | $2A$ | | $2A$ | | $2G$ | | $2E$ |
| | $2B$ | | $2C$ | | $4A$ | | $4B$ |
| | $2C$ | | $2B$ | | $4B$ | | $4A$ |
| | $2D$ | | $2C$ | | $4C$ | | $4B$ |
| | $2E$ | | $2B$ | | $4D$ | | $4A$ |
| | | | | | $2H$ | | $2F$ |
| | | | | | $2I$ | | $2F$ |
| $2B$ | $2J$ | | $2G$ | $2C$ | $2N$ | | $2K$ |
| | $2K$ | | $2H$ | | $2O$ | | $2L$ |
| | $2L$ | | $2I$ | | $4G$ | | $4E$ |
| | $2M$ | | $2J$ | | $4H$ | | $4D$ |
| | $4E$ | | $4C$ | | $4I$ | | $4E$ |
| | $4F$ | | $4C$ | | $4J$ | | $4D$ |
| | | | | | $2P$ | | $2M$ |
| | | | | | $2Q$ | | $2M$ |
| | | | | | $4K$ | | $4F$ |
| | | | | | $4L$ | | $4F$ |
| $2D$ | $2R$ | | $2N$ | $3A$ | $3A$ | | $3B$ |
| | $4M$ | | $4H$ | | $6A$ | | $6D$ |
| | $4N$ | | $4G$ | | | | |
| | $2S$ | | $2O$ | | | | |
| | $4O$ | | $4I$ | | | | |
| | $4P$ | | $4J$ | | | | |
| | $4Q$ | | $4J$ | | | | |
| | $4R$ | | $4I$ | | | | |
| $3B$ | $3B$ | | $3A$ | $3C$ | $3C$ | | $3C$ |
| | $6B$ | | $6A$ | | $6G$ | | $6E$ |
| | $6C$ | | $6C$ | | $6H$ | | $6G$ |
| | $6D$ | | $6B$ | | $6I$ | | $6F$ |
| | $6E$ | | $6C$ | | | | |
| | $6F$ | | $6B$ | | | | |
| $4A$ | $4S$ | | $4R$ | $4B$ | $4W$ | | $4K$ |
| | $4T$ | | $4S$ | | $4X$ | | $4L$ |
| | $4U$ | | $4U$ | | $4Y$ | | $4M$ |
| | $4V$ | | $4T$ | | $4Z$ | | $4M$ |
| | $8A$ | | $8B$ | | | | |
| | $8B$ | | $8B$ | | | | |

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Table 1.19 : Fusion of $2^7 : O_6^-(2)$ into $2^7 : Sp_6(2)$(continued)

| $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{O_6^-(2)}$ | $[g]_{2^7:O_6^-(2)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $4C$ | $4AA$ | | $4N$ | $4D$ | $4AG$ | | $4Z$ |
| | $4AB$ | | $4O$ | | $8E$ | | $8D$ |
| | $4AC$ | | $4Q$ | | $8F$ | | $8D$ |
| | $4AD$ | | $4P$ | | $4AH$ | | $4AB$ |
| | $4AE$ | | $4Q$ | | $4AI$ | | $4AC$ |
| | $4AF$ | | $4P$ | | $8G$ | | $8C$ |
| | $8C$ | | $8A$ | | $8H$ | | $8C$ |
| | $8D$ | | $8A$ | | $4AJ$ | | $4AA$ |
| $5A$ | $5A$ | | $5A$ | $6A$ | $6J$ | | $6M$ |
| | $10A$ | | $10A$ | | $6K$ | | $6N$ |
| | $10B$ | | $10C$ | | | | |
| | $10C$ | | $10B$ | | | | |
| | $10D$ | | $10B$ | | | | |
| | $10E$ | | $10C$ | | | | |
| $6B$ | $6L$ | | $6K$ | $6C$ | $6N$ | | $6U$ |
| | $6M$ | | $6L$ | | $12C$ | | $12H$ |
| | $12A$ | | $12C$ | | $12D$ | | $12G$ |
| | $12B$ | | $12C$ | | $6O$ | | $6V$ |
| $6D$ | $6P$ | | $6Q$ | $6E$ | $6T$ | | $6H$ |
| | $6Q$ | | $6R$ | | $6U$ | | $6I$ |
| | $6R$ | | $6T$ | | $12E$ | | $12B$ |
| | $6S$ | | $6S$ | | $12F$ | | $12A$ |
| | | | | | $12G$ | | $12B$ |
| | | | | | $12H$ | | $12A$ |
| | | | | | $6V$ | | $6J$ |
| | | | | | $6W$ | | $6J$ |
| $6F$ | $6X$ | | $6O$ | $6G$ | $6Z$ | | $6W$ |
| | $6Y$ | | $6P$ | | $6AA$ | | $6X$ |
| | $12I$ | | $12E$ | | $12M$ | | $12I$ |
| | $12J$ | | $12D$ | | $12N$ | | $12J$ |
| | $12K$ | | $12F$ | | | | |
| | $12L$ | | $12F$ | | | | |
| $8A$ | $8I$ | | $8H$ | $9A$ | $9A$ | | $9A$ |
| | $8J$ | | $8I$ | | $18A$ | | $18A$ |
| | $8K$ | | $8J$ | | | | |
| | $8L$ | | $8J$ | | | | |
| $10A$ | $10F$ | | $10D$ | $12A$ | $12O$ | | $12O$ |
| | $10G$ | | $10E$ | | $12P$ | | $12P$ |
| | $20A$ | | $20A$ | | | | |
| | $20B$ | | $20B$ | | | | |
| $12B$ | $12Q$ | | $12M$ | | | | |
| | $24A$ | | $24B$ | | | | |
| | $24B$ | | $24B$ | | | | |
| | $12R$ | | $12N$ | | | | |

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## 7.3 The group $2^7 : (2^5 : S_6)$

Let $G = H_4 = 2^7 : (2^5 : S_6)$ be the split extension of $K = 2^7$ by $Q = 2^5 : S_6$ , where $K$ is the vector space of dimension 7 over $GF(2)$ on which $Q$ acts.

### 7.3.1 The conjugacy classes of $2^7 : (2^5 : S_6)$

In this section we use the method of coset analysis discussed in Chapter 3 , to determine the conjugacy classes of elements of $2^7 : (2^5 : S_6)$ . We generated $2^5 : S_6$ by two elements $q_1 \in 4B$ and $q_2 \in 6E$ of $Sp_6(2)$. Ali[1] constructed $Sp_6(2)$ in terms of $7 \times 7$ matrices over $GF(2)$. Here $4B$ and $6E$ are conjugacy classes of elements of $Sp_6(2)$ and $q_1$ and $q_2$ are given by :

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$$q_1 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 0 & 1 & 0 & 0 \\ 1 & 1 & 0 & 1 & 1 & 1 & 1 \\ 1 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 \end{pmatrix} \quad q_2 = \begin{pmatrix} 1 & 0 & 1 & 1 & 0 & 0 & 0 \\ 0 & 1 & 1 & 0 & 1 & 1 & 1 \\ 1 & 0 & 1 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 1 & 1 \\ 1 & 0 & 0 & 1 & 0 & 0 & 0 \\ 1 & 0 & 1 & 0 & 0 & 0 & 1 \\ 1 & 0 & 1 & 0 & 0 & 1 & 0 \end{pmatrix}.$$

The elements $q_1$ and $q_2$ are of orders 4 and 6 respectively. We obtained the conjugacy classes of $2^5 : S_6$ using MAGMA and are represented in the table below. The class representatives of each class $[q]_{2^5:S_6}$ of $2^5 : S_6$ are given in terms of $7 \times 7$ matrices over $GF(2)$.

Table 7.19: The Conjugacy classes of $2^5 : S_6$

| $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ | $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ |
|---|---|---|---|---|---|
| $1A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1 | $2A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}$ | 1 |
| $2B$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&0&0&0\\ 1&1&1&1&0&0&0\\ 1&1&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&1&0&1\\ 0&0&0&0&1&1&0 \end{pmatrix}$ | 15 | $2C$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&0&0&0\\ 1&1&1&1&0&0&0\\ 1&1&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&1&1&0\\ 1&1&0&1&1&0&1 \end{pmatrix}$ | 15 |
| $2D$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&1&1&1&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}$ | 30 | $2E$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&1&1&1&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 30 |
| $2F$ | $\begin{pmatrix} 1&1&0&1&1&0&0\\ 0&1&1&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&1&1&0&1&0&0\\ 0&1&0&1&0&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 60 | $2G$ | $\begin{pmatrix} 1&1&0&1&1&0&0\\ 0&1&1&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&1&1&0&1&0&0\\ 0&1&0&1&0&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}$ | 60 |
| $2H$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&0&0&0\\ 1&0&1&0&0&0&0\\ 1&1&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&1&1&0\\ 1&1&0&1&1&0&1 \end{pmatrix}$ | 180 | $2I$ | $\begin{pmatrix} 1&0&0&1&1&0&0\\ 0&1&1&1&1&1&1\\ 0&0&1&0&0&0&0\\ 0&0&1&1&0&1&1\\ 0&0&1&0&1&1&1\\ 1&1&1&0&1&1&0\\ 1&1&1&0&1&0&1 \end{pmatrix}$ | 180 |
| $2J$ | $\begin{pmatrix} 1&0&0&1&1&0&0\\ 0&1&1&1&1&1&1\\ 0&0&1&0&0&0&0\\ 0&0&1&1&0&1&1\\ 0&0&1&0&1&1&1\\ 0&0&1&1&1&0&1\\ 0&0&1&1&1&1&0 \end{pmatrix}$ | 180 | $3A$ | $\begin{pmatrix} 1&1&1&0&1&1&1\\ 0&0&1&0&1&1&1\\ 0&1&1&1&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&1&1&0&1&0&1\\ 0&1&1&0&1&1&0 \end{pmatrix}$ | 160 |
| $3B$ | $\begin{pmatrix} 0&0&0&1&0&1&1\\ 0&1&0&1&0&0&0\\ 1&0&0&0&1&0&0\\ 1&0&0&1&0&1&1\\ 1&0&1&1&1&1&1\\ 1&0&1&1&1&1&0\\ 1&0&1&1&1&0&1 \end{pmatrix}$ | 640 | $4A$ | $\begin{pmatrix} 0&1&0&1&0&0&0\\ 1&0&0&1&0&0&0\\ 0&1&1&1&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&0&1&1&1&1&0\\ 1&0&1&1&1&0&1 \end{pmatrix}$ | 120 |
| $4B$ | $\begin{pmatrix} 0&1&0&1&0&0&0\\ 1&0&0&1&0&0&0\\ 0&1&1&1&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&1&1&0&1&0&1\\ 0&1&1&0&1&1&0 \end{pmatrix}$ | 120 | $4C$ | $\begin{pmatrix} 1&0&0&1&1&0&0\\ 0&1&1&1&1&1&1\\ 1&1&1&1&0&0&0\\ 0&0&1&1&0&1&1\\ 0&0&1&0&1&1&1\\ 1&0&1&0&0&0&1\\ 1&0&1&0&0&1&0 \end{pmatrix}$ | 180 |
| $4D$ | $\begin{pmatrix} 1&0&0&1&1&0&0\\ 0&1&1&1&1&1&1\\ 1&1&1&1&0&0&0\\ 0&0&1&1&0&1&1\\ 0&0&1&0&1&1&1\\ 0&1&1&1&0&1&0\\ 0&1&1&1&0&0&1 \end{pmatrix}$ | 180 | $4E$ | $\begin{pmatrix} 1&1&0&1&1&0&0\\ 0&1&1&0&0&0&0\\ 1&1&1&1&0&0&0\\ 0&1&1&0&1&0&0\\ 0&1&0&1&0&0&0\\ 0&0&0&0&1&0&1\\ 0&0&0&0&1&1&0 \end{pmatrix}$ | 360 |
| $4F$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&0&1&1&1\\ 0&0&1&0&1&0&0\\ 1&1&0&1&1&1&1\\ 1&0&0&1&0&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 720 | $4G$ | $\begin{pmatrix} 0&1&0&0&1&0&0\\ 1&0&1&0&1&1&1\\ 1&1&1&1&0&0&0\\ 0&0&1&1&0&1&1\\ 1&1&1&1&1&1&1\\ 0&0&1&1&0&1&0\\ 0&0&1&1&0&0&1 \end{pmatrix}$ | 720 |

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Table 7.19 : The Conjugacy classes of $2^5 : S_6$(continue)

| $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ | $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ |
|---|---|---|---|---|---|
| $4H$ | $\begin{pmatrix} 1&0&1&0&0&1&1\\ 0&0&1&1&0&0&0\\ 0&0&1&1&1&0&0\\ 0&1&0&0&0&1&1\\ 0&1&0&1&1&1&1\\ 1&0&1&0&0&0&1\\ 1&0&1&0&0&1&0 \end{pmatrix}$ | 720 | $4I$ | $\begin{pmatrix} 1&0&1&0&0&1&1\\ 0&0&1&1&0&0&0\\ 0&0&1&1&1&0&0\\ 0&1&0&0&0&1&1\\ 0&1&0&1&1&1&1\\ 0&1&1&1&0&1&0\\ 0&1&1&1&0&0&1 \end{pmatrix}$ | 720 |
| $4J$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&0&1&1&1\\ 0&0&1&0&1&0&0\\ 1&1&0&1&1&1&1\\ 1&0&0&1&0&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}$ | 720 | $5A$ | $\begin{pmatrix} 0&1&1&0&1&1&1\\ 1&1&0&0&1&1&1\\ 1&0&0&0&0&1&1\\ 0&1&1&1&0&0&0\\ 0&1&1&0&0&0&0\\ 1&0&1&0&1&0&1\\ 1&0&1&0&1&1&0 \end{pmatrix}$ | 2304 |
| $6A$ | $\begin{pmatrix} 1&1&1&0&1&1&1\\ 0&0&1&0&1&1&1\\ 0&1&1&1&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&0&1&1&1&1&0\\ 1&0&1&1&1&0&1 \end{pmatrix}$ | 160 | $6B$ | $\begin{pmatrix} 1&1&1&0&1&1&1\\ 1&1&1&1&1&1&1\\ 1&0&1&0&0&0&0\\ 1&1&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 0&1&1&0&0&1&0\\ 0&1&1&0&0&0&1 \end{pmatrix}$ | 480 |
| $6C$ | $\begin{pmatrix} 1&1&1&0&1&1&1\\ 1&1&1&1&1&1&1\\ 1&0&1&0&0&0&0\\ 1&1&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 1&0&1&1&0&0&1\\ 1&0&1&1&0&1&0 \end{pmatrix}$ | 480 | $6D$ | $\begin{pmatrix} 0&0&0&1&0&1&1\\ 0&1&0&1&0&0&0\\ 1&0&0&0&1&0&0\\ 1&0&0&1&0&1&1\\ 1&0&1&1&1&1&1\\ 0&1&1&0&1&0&1\\ 0&1&1&0&1&1&0 \end{pmatrix}$ | 640 |
| $6E$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&1&0&0\\ 1&0&1&1&0&1&1\\ 1&1&0&0&1&0&0\\ 1&1&0&0&0&1&1\\ 1&0&0&1&0&0&1\\ 1&0&0&1&0&1&0 \end{pmatrix}$ | 960 | $6F$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&1&0&0\\ 1&0&1&1&0&1&1\\ 1&1&0&0&1&0&0\\ 1&1&0&0&0&1&1\\ 0&1&0&0&0&1&0\\ 0&1&0&0&0&0&1 \end{pmatrix}$ | 960 |
| $6G$ | $\begin{pmatrix} 1&0&1&1&0&0&0\\ 0&1&1&0&1&1&1\\ 1&0&1&0&1&0&0\\ 0&0&0&0&1&1&1\\ 1&0&0&1&0&0&0\\ 0&1&1&1&0&1&0\\ 0&1&1&1&0&0&1 \end{pmatrix}$ | 1920 | $6H$ | $\begin{pmatrix} 1&0&1&1&0&0&0\\ 0&1&1&0&1&1&1\\ 1&0&1&0&1&0&0\\ 0&0&0&0&1&1&1\\ 1&0&0&1&0&0&0\\ 1&0&1&0&0&0&1\\ 1&0&1&0&0&1&0 \end{pmatrix}$ | 1920 |
| $8A$ | $\begin{pmatrix} 0&1&1&1&0&1&1\\ 0&0&1&1&0&0&0\\ 0&0&1&1&1&0&0\\ 1&0&0&1&0&1&1\\ 0&1&0&1&1&1&1\\ 1&0&1&0&1&0&1\\ 1&0&1&0&1&1&0 \end{pmatrix}$ | 1440 | $8B$ | $\begin{pmatrix} 0&1&0&1&0&0&0\\ 0&1&0&1&1&1&1\\ 1&1&1&1&1&0&0\\ 1&1&0&1&1&1&1\\ 0&1&0&0&0&0&0\\ 0&1&1&0&1&0&1\\ 0&1&1&0&1&1&0 \end{pmatrix}$ | 1440 |
| $10A$ | $\begin{pmatrix} 0&1&1&0&1&1&1\\ 1&1&0&0&1&1&1\\ 1&0&0&0&0&1&1\\ 0&1&1&1&0&0&0\\ 0&1&1&&0&0&0\\ 0&1&1&1&1&1&0\\ 0&1&1&1&1&0&1 \end{pmatrix}$ | 2304 | $12A$ | $\begin{pmatrix} 0&1&0&1&0&0&0\\ 0&1&0&0&1&0&0\\ 1&0&1&1&0&1&1\\ 1&1&0&0&1&0&0\\ 1&1&0&0&0&1&1\\ 0&0&1&0&1&1&0\\ 0&0&1&0&1&0&1 \end{pmatrix}$ | 960 |
| $12B$ | $\begin{pmatrix} 0&1&0&1&0&0&0\\ 0&1&0&0&1&0&0\\ 1&0&1&1&0&1&1\\ 1&1&0&0&1&0&0\\ 1&1&0&0&0&1&1\\ 1&1&1&1&1&0&1\\ 1&1&1&1&1&1&0 \end{pmatrix}$ | 960 | | | |

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$2^5 : S_6$ has 37 conjugacy classes and under the action of $2^5 : S_6$ on $2^7$ we obtained eight orbits of lenghts 1,1,1,1,30,30,32 and 32. The point stabilizers for the orbits of lenghts 1 , 30 and 32 are $2^5 : S_6$ , $(2^2 \times 2^2).S_4$ and $S_6$ of indices 1 , 30 and 32, respectively ,in $2^5 : S_6$. We used Programme A in Magma to compute the orbits lengths and the corresponding stabilizers. We consulted the Gap team at Aachen to help us with some of the structures of the stabilizers. Let $\chi(2^5 : S_6|2^7)$ be the permutation character of $2^5 : S_6$ on $2^7$. We also let $\chi(2^5 : S_6|(2^2 \times 2^2).S_4)$ and $\chi(2^5 : S_6|S_6)$ be the permutation characters of $2^5 : S_6$ on $(2^2 \times 2^2).S_4$ and $S_6$, respectively . The permutation characters $\chi(2^5 : S_6|(2^2 \times 2^2).S_4) = 1a+5b+9a+15b$ and $\chi(2^5 : S_6|S_6) = 1a+6a+10c+15b$ are written in terms of the irreducible characters of $2^5 : S_6$ which were calculated through the program Magma.

We obtain that

$\chi(2^5 : S_6|2^7) = I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{(2^2\times 2^2).S_4} + I^{2^5:S_6}_{(2^2\times 2^2).S_4} + I^{2^5:S_6}_{S_6} + I^{2^5:S_6}_{S_6}$

, where $I^{2^5:S_6}_{(2^2\times 2^2).S_4}$ and $I^{2^5:S_6}_{S_6}$ are the identity characters of $(2^2 \times 2^2).S_4$ and $S_6$, respectively induced to $2^5 : S_6$. We note that $I^{2^5:S_6}_{(2^2\times 2^2).S_4} = \chi(2^5 : S_6|(2^2 \times 2^2).S_4)$ and

$I^{2^5:S_6}_{S_6} = \chi(2^5 : S_6|S_6)$.

Therefore

$\chi(2^5 : S_6|2^7) = I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{(2^2\times 2^2).S_4} + I^{2^5:S_6}_{(2^2\times 2^2).S_4} + I^{2^5:S_6}_{S_6} + I^{2^5:S_6}_{S_6}$

$$= 1a + 1a + 1a + 1a + 1a + 1a + 5b + 9a + 15b + 1a + 5b + 9a + 15b + 1a + 6a + 10c + 15b + 1a + 6a + 10c + 15b$$

$$= 8 \times 1a + 2 \times 5b + 2 \times 6a + 2 \times 10c + 2 \times 9a + 4 \times 15b$$

The values of $\chi(2^5 : S_6|2^7)$ on the different classes of $2^5 : S_6$ determine the number $l$ of fixed points of each $q \in 2^5 : S_6$ in $2^7$.Hence these values of the $l$'s will enable us to calculate the conjugacy classes of $2^7 : (2^5 : S_6)$. These values of $l$'s are listed in Table 7.20.

Table 7.20: The values of $\chi(2^5 : S_6|2^7)$ on the different classes of $2^5 : S_6$

| $[q]_{2^5:S_6}$ | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $2I$ | $2J$ | $3A$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 30 | 30 | 14 | 14 | 14 | 14 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 30 | 30 | 14 | 14 | 14 | 14 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi(2^5 : S_6\|S_6)$ | 32 | 0 | 0 | 0 | 0 | 16 | 8 | 0 | 0 | 0 | 8 | 8 |
| $\chi(2^5 : S_6\|S_6)$ | 32 | 0 | 0 | 0 | 0 | 16 | 8 | 0 | 0 | 0 | 8 | 8 |
| $l$ | 128 | 64 | 32 | 32 | 32 | 64 | 32 | 16 | 16 | 16 | 32 | 32 |

| $[q]_{2^5:S_6}$ | $3B$ | $4A$ | $4B$ | $4C$ | $4D$ | $4E$ | $4F$ | $4G$ | $4H$ | $4I$ | $4J$ | $5A$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 0 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 0 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| $\chi(2^5 : S_6\|S_6)$ | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 2 |
| $\chi(2^5 : S_6\|S_6)$ | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 2 |
| $l$ | 8 | 16 | 16 | 8 | 8 | 8 | 16 | 8 | 8 | 16 | 8 | 8 |

| $[q]_{2^5:S_6}$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ | $6G$ | $6H$ | $8A$ | $8B$ | $10A$ | $12A$ | $12B$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 6 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 6 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi(2^5 : S_6\|S_6)$ | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi(2^5 : S_6\|S_6)$ | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| $l$ | 16 | 8 | 8 | 4 | 16 | 8 | 4 | 8 | 4 | 4 | 4 | 4 | 4 |

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These values of $l$ enabled us to determine the number $f_j$ of orbits $Q_i$'s , $1 \leq i \leq l$ which have fused together under the action of $C_{2^5:S_6}(q)$ ,for each class representative $q \in 2^5 : S_6$ , to form one orbit $\triangle_f$. We obtain that $2^7 : (2^5 : S_6)$ has exactly 219 conjugacy classes of elements after the calculation of the $f_j$'s. These values

of the $f_j$'s together with the lengths of each class $[g]_{2^7:(2^5:S_6)}$ and its corresponding centralizer $C_{2^7:(2^5:S_6)}(g)$ are listed in Table 7.21. We also list the $d_j$'s and the orders of each class representative $d_j q \in G$. See Section 7.1.1 how these calculations are performed. Table 7.21 contains all the relevant information regarding the conjugacy classes of $2^7 : (2^5 : S_6)$.

Table 7.21: The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$

| $[q]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $1A$ | 128 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $1A$ | 1 | 2949120 |
| | | $f_2 = 1$ | $(1,1,0,1,0,0,0)$ | $(1,1,0,1,0,0,0)$ | $2A$ | 1 | 2949120 |
| | | $f_3 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,1,1)$ | $2B$ | 1 | 2949120 |
| | | $f_4 = 1$ | $(1,1,0,1,0,1,1)$ | $(1,1,0,1,0,1,1)$ | $2C$ | 1 | 2949120 |
| | | $f_5 = 30$ | $(1,1,1,1,1,1,1)$ | $(1,1,1,1,1,1,1)$ | $2D$ | 30 | 98304 |
| | | $f_6 = 30$ | $(1,1,0,1,1,1,1)$ | $(1,1,0,1,1,1,1)$ | $2E$ | 30 | 98304 |
| | | $f_7 = 32$ | $(1,1,1,1,1,1,0)$ | $(1,1,1,1,1,1,0)$ | $2F$ | 32 | 92160 |
| | | $f_8 = 32$ | $(1,1,1,1,1,0,1)$ | $(1,1,1,1,1,0,1)$ | $2G$ | 32 | 92160 |
| $2A$ | 64 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2H$ | 2 | 1474560 |
| | | $f_2 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2I$ | 2 | 1474560 |
| | | $f_3 = 16$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $4A$ | 32 | 92160 |
| | | $f_4 = 16$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,1,1)$ | $4B$ | 32 | 92160 |
| | | $f_5 = 30$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2J$ | 60 | 49152 |
| $2B$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2K$ | 60 | 49152 |
| | | $f_2 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2L$ | 60 | 49152 |
| | | $f_3 = 3$ | $(1,1,1,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2M$ | 180 | 16384 |
| | | $f_4 = 3$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2N$ | 180 | 16384 |
| | | $f_5 = 8$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $4C$ | 480 | 6144 |
| | | $f_6 = 16$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,1,1,1)$ | $4D$ | 960 | 3072 |
| $2C$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2O$ | 60 | 49152 |
| | | $f_2 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2P$ | 60 | 49152 |
| | | $f_3 = 4$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $4E$ | 240 | 12288 |
| | | $f_4 = 4$ | $(1,0,0,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $4F$ | 240 | 12288 |
| | | $f_5 = 6$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2Q$ | 360 | 8192 |
| | | $f_6 = 16$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,1,0,0)$ | $4G$ | 960 | 3072 |
| $2D$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2R$ | 120 | 24576 |
| | | $f_2 = 1$ | $(0,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2S$ | 120 | 24576 |
| | | $f_3 = 4$ | $(1,1,1,1,1,1,0)$ | $(1,0,0,0,0,1,1)$ | $4H$ | 480 | 6144 |
| | | $f_4 = 4$ | $(1,1,1,1,1,0,1)$ | $(1,0,0,0,0,1,1)$ | $4I$ | 480 | 6144 |
| | | $f_5 = 6$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2T$ | 720 | 4096 |
| | | $f_6 = 8$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,1,0,0,0)$ | $4J$ | 960 | 3072 |
| | | $f_7 = 8$ | $(1,1,0,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $4K$ | 960 | 3072 |
| $2E$ | 64 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2U$ | 60 | 49152 |
| | | $f_2 = 1$ | $(1,1,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2V$ | 60 | 49152 |
| | | $f_3 = 1$ | $(0,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2W$ | 60 | 49152 |
| | | $f_4 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2X$ | 60 | 49152 |
| | | $f_5 = 8$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,1,0,0,0)$ | $4L$ | 480 | 6144 |
| | | $f_6 = 8$ | $(1,1,1,1,1,1,0)$ | $(0,1,0,1,0,0,0)$ | $4M$ | 480 | 6144 |
| | | $f_7 = 8$ | $(1,1,1,1,1,0,1)$ | $(0,1,0,1,0,0,0)$ | $4N$ | 480 | 6144 |
| | | $f_8 = 8$ | $(1,1,1,1,1,0,0)$ | $(0,1,0,1,0,0,0)$ | $4O$ | 480 | 6144 |
| | | $f_9 = 12$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2Y$ | 720 | 4096 |
| | | $f_{10} = 16$ | $(1,1,0,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2Z$ | 960 | 3072 |
| $2F$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AA$ | 240 | 12288 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AB$ | 240 | 12288 |
| | | $f_3 = 1$‘ | $(1,1,1,1,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AC$ | 240 | 12288 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AD$ | 240 | 12288 |
| | | $f_5 = 2$ | $(1,1,1,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $2AE$ | 480 | 6144 |
| | | $f_6 = 2$ | $(1,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $2AF$ | 480 | 6144 |
| | | $f_7 = 12$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,1,1,0,0)$ | $4P$ | 2880 | 1024 |
| | | $f_8 = 12$ | $(1,1,1,1,1,0,1)$ | $(0,1,0,1,1,0,0)$ | $4Q$ | 2880 | 1024 |

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Table 7.21 : The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$

| $[g]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $2G$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AG$ | 480 | 6144 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,0)$ | $(1,1,0,1,0,1,1)$ | $4R$ | 480 | 6144 |
| | | $f_3 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,1,1)$ | $4S$ | 480 | 6144 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AH$ | 480 | 6144 |
| | | $f_5 = 6$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,1,1,0,0)$ | $4T$ | 2880 | 1024 |
| | | $f_6 = 6$ | $(1,1,1,1,1,0,1)$ | $(1,0,0,0,1,1,1)$ | $4U$ | $288O$ | 1024 |
| $2H$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AI$ | 1440 | 2048 |
| | | $f_2 = 1$ | $(1,1,1,1,1,0,0)$ | $(1,0,0,0,0,0,0)$ | $4V$ | 1440 | 2048 |
| | | $f_3 = 1$ | $(1,1,1,1,1,0,0)$ | $(1,0,0,0,0,0,0)$ | $4W$ | 1440 | 2048 |
| | | $f_4 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AJ$ | 1440 | 2048 |
| | | $f_5 = 2$ | $(1,0,0,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $4X$ | 2880 | 1024 |
| | | $f_6 = 2$ | $(1,0,1,1,1,1,1)$ | $(0,1,0,1,0,0,0)$ | $4Y$ | 2880 | 1024 |
| | | $f_7 = 4$ | $(1,1,0,1,1,0,1)$ | $(1,1,0,1,1,0,0)$ | $4Z$ | 5760 | 512 |
| | | $f_8 = 4$ | $(1,1,1,1,1,0,1)$ | $(0,1,0,1,1,0,0)$ | $4AA$ | 5760 | 512 |
| $2I$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AK$ | 1440 | 2048 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AL$ | 1440 | 2048 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,0,1,1,1)$ | $4AB$ | 1440 | 2048 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,0,1,1,1)$ | $4AC$ | 1440 | 2048 |
| | | $f_5 = 2$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,1,1,0,0)$ | $4AD$ | 2880 | 1024 |
| | | $f_6 = 2$ | $(0,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $4AE$ | 2880 | 1024 |
| | | $f_7 = 4$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,0,0,1,1)$ | $4AF$ | 5760 | 512 |
| | | $f_8 = 4$ | $(1,0,1,1,1,0,1)$ | $(1,1,1,1,0,0,0)$ | $4AG$ | 5760 | 512 |
| $2J$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AM$ | 720 | 4096 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AN$ | 720 | 4096 |
| | | $f_3 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AO$ | 720 | 4096 |
| | | $f_4 = 1$ | $(0,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AP$ | 720 | 4096 |
| | | $f_5 = 2$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,1,1,0,0)$ | $4AH$ | 1440 | 2048 |
| | | $f_6 = 2$ | $(0,1,0,1,0,1,1)$ | $(0,0,0,1,1,0,0)$ | $4AI$ | 1440 | 2048 |
| | | $f_7 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,1,1,0,0)$ | $4AJ$ | 1440 | 2048 |
| | | $f_8 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,1,1,0,0)$ | $4AK$ | 1440 | 2048 |
| | | $f_9 = 4$ | $(0,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2AQ$ | 2880 | 1024 |
| | | $f_{10} = 8$ | $(1,1,1,1,1,1,1)$ | $(0,0,1,0,0,1,1)$ | $4AL$ | 5760 | 512 |
| | | $f_{11} = 8$ | $(1,1,1,1,0,0,1)$ | $(0,0,1,1,1,1,1)$ | $4AM$ | 5760 | 512 |
| $3A$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3A$ | 640 | 4608 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $6A$ | 640 | 4608 |
| | | $f_3 = 1$ | $(1,0,1,1,1,0,0)$ | $(1,1,0,1,0,1,1)$ | $6B$ | 640 | 4608 |
| | | $f_4 = 1$ | $(0,1,0,1,0,1,1)$ | $(0,0,0,0,0,1,1)$ | $6C$ | 640 | 4608 |
| | | $f_5 = 6$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,0,0,0,0)$ | $6D$ | 3840 | 768 |
| | | $f_6 = 6$ | $(1,0,1,1,0,1,1)$ | $(1,1,0,1,1,0,0)$ | $6E$ | 3840 | 768 |
| | | $f_7 = 8$ | $(1,1,1,1,1,1,0)$ | $(1,0,0,1,0,0,1)$ | $6F$ | 5120 | 576 |
| | | $f_8 = 8$ | $(1,1,1,1,1,0,1)$ | $(1,0,0,1,0,1,0)$ | $6G$ | 5120 | 576 |
| $3B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3B$ | 10240 | 288 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $6H$ | 10240 | 288 |
| | | $f_3 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,1,0,1,1)$ | $6I$ | 10240 | 288 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(1,1,0,1,0,1,1)$ | $6J$ | 10240 | 288 |
| | | $f_5 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,1,1,0,0,0,1)$ | $6K$ | 20480 | 144 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,1,1,0,0,1,0)$ | $6L$ | 20480 | 144 |
| $4A$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AN$ | 960 | 3072 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AO$ | 960 | 3072 |
| | | $f_3 = 3$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,1,0,0,0)$ | $4AP$ | 2880 | 1024 |
| | | $f_4 = 3$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AQ$ | 2880 | 1024 |
| | | $f_5 = 8$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,0,0)$ | $8A$ | 7680 | 384 |
| $4B$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AR$ | 960 | 3072 |
| | | $f_2 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AS$ | 960 | 3072 |
| | | $f_3 = 3$ | $(0,1,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AT$ | 2880 | 1024 |
| | | $f_4 = 3$ | $(0,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AU$ | 2880 | 1024 |
| | | $f_5 = 8$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,0,0)$ | $8B$ | 7680 | 384 |
| $4C$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AV$ | 2880 | 1024 |
| | | $f_2 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4AW$ | 2880 | 1024 |
| | | $f_3 = 2$ | $(0,1,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AX$ | 5760 | 512 |
| | | $f_4 = 4$ | $(1,1,0,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4AY$ | 11520 | 256 |
| $4D$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4AZ$ | 2880 | 1024 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BA$ | 2880 | 1024 |
| | | $f_3 = 2$ | $(0,1,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BB$ | 5760 | 512 |
| | | $f_4 = 4$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BC$ | 11520 | 256 |
| $4E$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BD$ | 5760 | 512 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BE$ | 5760 | 512 |
| | | $f_3 = 2$ | $(1,1,1,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BF$ | 11520 | 256 |
| | | $f_4 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BG$ | 11520 | 256 |
| | | $f_5 = 2$ | $(0,1,1,0,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BH$ | 11520 | 256 |

Table 7.21 : The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$

| $[q]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $4F$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BI$ | 5760 | 512 |
| | | $f_2 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BJ$ | 5760 | 512 |
| | | $f_3 = 1$ | $(1,1,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BK$ | 5760 | 512 |
| | | $f_4 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BL$ | 5760 | 512 |
| | | $f_5 = 2$ | $(1,1,0,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BM$ | 11520 | 256 |
| | | $f_6 = 2$ | $(1,0,0,0,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BN$ | 11520 | 256 |
| | | $f_7 = 4$ | $(1,1,1,0,1,1,1)$ | $(0,1,1,0,0,1,1)$ | $8C$ | 23040 | 128 |
| | | $f_8 = 4$ | $(0,0,1,0,1,0,1)$ | $(0,1,1,0,0,1,1)$ | $8D$ | 23040 | 128 |
| $4G$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BO$ | 11520 | 256 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BP$ | 11520 | 256 |
| | | $f_3 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BQ$ | 11520 | 256 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BR$ | 11520 | 256 |
| | | $f_5 = 2$ | $(0,1,1,1,1,1,0)$ | $(1,1,0,1,0,0,0)$ | $8E$ | 23040 | 128 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,0,0)$ | $8F$ | 23040 | 128 |
| $4H$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BS$ | 11520 | 256 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BT$ | 11520 | 256 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BU$ | 11520 | 256 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4BV$ | 11520 | 256 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,1,1,0,0)$ | $8G$ | 23040 | 128 |
| | | $f_6 = 2$ | $(1,1,1,0,1,0,1)$ | $(0,0,0,1,1,0,0)$ | $8H$ | 23040 | 128 |
| $4I$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BW$ | 5760 | 512 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BX$ | 5760 | 512 |
| | | $f_3 = 1$ | $(0,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BY$ | 5760 | 512 |
| | | $f_4 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BZ$ | 5760 | 512 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CA$ | 11520 | 256 |
| | | $f_6 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CB$ | 11520 | 256 |
| | | $f_7 = 4$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,1,1,0,0)$ | $8I$ | 23040 | 128 |
| | | $f_8 = 4$ | $(1,1,1,0,1,1,0)$ | $(0,0,0,1,1,0,0)$ | $8J$ | 23040 | 128 |
| $4J$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CC$ | 11520 | 256 |
| | | $f_2 = 1$ | $(1,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CD$ | 11520 | 256 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CE$ | 11520 | 256 |
| | | $f_4 = 1$ | $(1,1,0,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CF$ | 11520 | 256 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,1,0,1,1)$ | $8K$ | 23040 | 128 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,1,0,1,0,1,1)$ | $8L$ | 23040 | 128 |
| $5A$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $5A$ | 36864 | 80 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,0,1,1)$ | $10A$ | 36864 | 80 |
| | | $f_3 = 1$ | $(0,1,1,0,1,1,1)$ | $(0,0,0,0,0,1,1)$ | $10B$ | 36864 | 80 |
| | | $f_4 = 1$ | $(0,1,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $10C$ | 36864 | 80 |
| | | $f_5 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,0,1,1,1,1,0)$ | $10D$ | 73728 | 40 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,1,1,1,0,1)$ | $10E$ | 73728 | 40 |
| $6A$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6M$ | 1280 | 2304 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6N$ | 1280 | 2304 |
| | | $f_3 = 4$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $12A$ | 5120 | 576 |
| | | $f_4 = 4$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,1,1)$ | $12B$ | 5120 | 576 |
| | | $f_5 = 6$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6O$ | 7680 | 384 |
| $6B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6P$ | 7680 | 384 |
| | | $f_2 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Q$ | 7680 | 384 |
| | | $f_3 = 2$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $12C$ | 15360 | 192 |
| | | $f_4 = 4$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,1,1,1)$ | $12D$ | 30720 | 96 |
| $6C$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6R$ | 7680 | 384 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,1,0,0,0)$ | $12E$ | 7680 | 384 |
| | | $f_3 = 1$ | $(1,1,1,1,1,0,0)$ | $(1,1,0,1,0,0,0)$ | $12F$ | 7680 | 384 |
| | | $f_4 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6S$ | 7680 | 384 |
| | | $f_4 = 4$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,1,0,0)$ | $12G$ | 30720 | 96 |
| $6D$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6T$ | 20480 | 144 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6U$ | 20480 | 144 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $12H$ | 20480 | 144 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,1,1)$ | $12I$ | 20480 | 144 |
| $6E$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6V$ | 7680 | 384 |
| | | $f_2 = 1$ | $(1,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6W$ | 7680 | 384 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6X$ | 7680 | 384 |
| | | $f_4 = 1$ | $(1,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Y$ | 7680 | 384 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,1)$ | $(1,0,0,0,0,0,0)$ | $12J$ | 15360 | 192 |
| | | $f_6 = 2$ | $(1,1,1,0,0,1,1)$ | $(1,0,0,0,0,0,0)$ | $12K$ | 15360 | 192 |
| | | $f_7 = 2$ | $(1,1,0,1,1,1,0)$ | $(1,0,0,0,0,0,0)$ | $12L$ | 15360 | 192 |
| | | $f_8 = 2$ | $(1,1,0,1,1,0,1)$ | $(1,0,0,0,0,0,0)$ | $12M$ | 15360 | 192 |
| | | $f_9 = 4$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6Z$ | 30720 | 96 |

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Table 7.21 : The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$

| $[g]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $6F$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AA$ | 15360 | 192 |
| | | $f_2 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AB$ | 15360 | 192 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,0)$ | $(0,1,0,1,0,1,1)$ | $12N$ | 15360 | 192 |
| | | $f_4 = 1$ | $(1,1,0,1,1,0,1)$ | $(0,1,0,1,0,1,1)$ | $12O$ | 15360 | 192 |
| | | $f_5 = 2$ | $(1,1,1,1,1,1,1)$ | $(1,0,0,0,0,0,0)$ | $12P$ | 30720 | 96 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $12Q$ | 30720 | 96 |
| $6G$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AC$ | 61440 | 48 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AD$ | 61440 | 48 |
| | | $f_3 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $12R$ | 61440 | 48 |
| | | $f_4 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,1,1)$ | $12S$ | 61440 | 48 |
| $6H$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AE$ | 30720 | 96 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AF$ | 30720 | 96 |
| | | $f_3 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AG$ | 30720 | 96 |
| | | $f_4 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AH$ | 30720 | 96 |
| | | $f_5 = 2$ | $(1,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $6AI$ | 61440 | 48 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6AJ$ | 61440 | 48 |
| $8A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $8K$ | 46080 | 64 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8L$ | 46080 | 64 |
| | | $f_3 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $8M$ | 46080 | 32 |
| $8B$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $8N$ | 46080 | 64 |
| | | $f_2 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8O$ | 46080 | 64 |
| | | $f_3 = 2$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $8P$ | 46080 | 32 |
| $10A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $10F$ | 73728 | 40 |
| | | $f_2 = 1$ | $(0,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $10G$ | 73728 | 40 |
| | | $f_3 = 1$ | $(1,1,1,1,1,0,1)$ | $(1,1,0,1,0,1,1)$ | $20A$ | 73728 | 40 |
| | | $f_4 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,1,1)$ | $20B$ | 73728 | 40 |
| $12A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12T$ | 30720 | 96 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12U$ | 30720 | 96 |
| | | $f_3 = 2$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,0,0)$ | $24A$ | 61440 | 48 |
| $12B$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12V$ | 30720 | 96 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12W$ | 30720 | 96 |
| | | $f_3 = 2$ | $(1,1,1,1,1,1,0)$ | $(1,1,0,1,0,0,0)$ | $24B$ | 61440 | 48 |

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### 7.3.2 The Inertia groups of $2^7 : (2^5 : S_6)$

The action of $2^5 : S_6$ on the conjugacy classes of $2^7$ determine 8 orbits being formed , with respective lengths of $1, 1, 1, 1, 30, 30, 32$ and 32. Therefore by Brauer's Theorem $2^5 : S_6$ acting on $Irr(2^7)$ will also form 8 orbits of lengths 1, $r_1$, $r_2$, $r_3$, $r_4$, $r_5$, $r_6$and $r_7$ such that $r_1 + r_2 + r_3 + r_4 + r_5 + r_6 + r_7 = 127$. There are eight inertia groups $H_i = 2^7 : \bar{H}_i$, $i$ = 1,2,...,8, where the $\bar{H}_i$'s are the inertia factor groups of the inertia groups , which are maximal subgroups or sit in the maximal subgroups of $2^5 : S_6$. Now the sum of the number of conjugacy classes of these inertia factors must in total be equal to 219 , that is, the number of the conjugacy classes of $2^7 : (2^5 : S_6)$. By constructing all maximal subgroups of $2^5 : S_6$ in Magma and taking into account the above facts, we conclude that $r_1 = 1$, $r_2 = 12$, $r_3 = r_4 = 16$, $r_5 = 20$, $r_6 = 30$

and $r_7 = 32$. We obtain that $\bar{H}_1 = \bar{H}_2 = 2^5 : S_5$, $\bar{H}_3 = 2^4 : S_5$, $\bar{H}_4 = S_6 \times 2$, $\bar{H}_5 = S_6 \times 2$, $\bar{H}_6 = (S_4 \times S_4) : 2$, $\bar{H}_7 = (2^2 \times 2^2).S_4$ and $\bar{H}_8 = S_6$. Note $\bar{H}_4 \neq \bar{H}_5$. Programme A and the Gap team at Aachen were very helpful to determine some of the structures of the inertia factor groups. The inertia factor groups, the $\bar{H}_i$'s , are constructed from elements within $2^5 : S_6$ and the generators are as follows.

- $\langle \alpha_1, \alpha_2, \alpha_3 \rangle = 2^4 : S_5$ , $\alpha_1 \in 4B$ ,$\alpha_2 \in 12B$, $\alpha_3 \in 2C$ where

$$\alpha_1 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&1&1&1&0&0\\ 0&0&0&1&1&0&0\\ 1&1&0&1&1&0&0\\ 0&0&0&1&1&0&1\\ 0&0&0&1&1&1&0 \end{pmatrix}, \alpha_2 = \begin{pmatrix} 0&1&1&1&1&1&1\\ 0&1&1&0&1&1&1\\ 0&0&0&1&1&0&0\\ 1&1&0&0&0&0&0\\ 1&0&0&0&1&1&1\\ 1&0&1&1&0&0&1\\ 1&0&1&1&0&1&0 \end{pmatrix}, \alpha_3 = \begin{pmatrix} 0&1&0&1&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 1&1&0&0&0&0&0\\ 1&1&0&1&1&0&0\\ 1&1&1&1&0&0&1\\ 1&1&1&1&0&1&0 \end{pmatrix}$$

- $\langle \lambda_1, \lambda_2, \lambda_3 \rangle = S_6 \times 2$, $\lambda_1 \in 10A$ ,$\lambda_2 \in 2F$,$\lambda_3 \in 2A$ where

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$$\lambda_1 = \begin{pmatrix} 0&0&1&0&0&1&1\\ 1&0&1&1&0&0&0\\ 0&1&1&0&1&0&0\\ 0&1&0&0&0&1&1\\ 1&1&1&0&1&1&1\\ 0&0&1&1&0&1&0\\ 0&0&1&1&0&0&1 \end{pmatrix}, \lambda_2 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&0&0&1&0&1&1\\ 0&1&1&1&1&0&0\\ 0&1&0&0&0&1&1\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}, \lambda_3 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}$$

- $\langle \rho_1, \rho_2, \rho_3 \rangle = S_6 \times 2$, $\rho_1 \in 10A$ ,$\rho_2 \in 2F$,$\rho_3 \in 2A$ where

$$\rho_1 = \begin{pmatrix} 0&0&1&0&0&1&1\\ 1&0&1&1&0&0&0\\ 0&1&1&0&1&0&0\\ 0&1&0&0&0&1&1\\ 1&1&1&0&1&1&1\\ 0&0&1&1&0&1&0\\ 0&0&1&1&0&0&1 \end{pmatrix}, \rho_2 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&0&0&1&0&1&1\\ 1&0&1&0&1&0&0\\ 0&1&0&0&0&1&1\\ 0&0&0&0&1&0&0\\ 1&0&0&0&0&1&0\\ 1&0&0&0&0&0&1 \end{pmatrix}, \rho_3 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}$$

- $\langle \tau_1, \tau_2, \tau_3, \tau_4 \rangle = (S_4 \times S_4) : 2$, $\tau_1 \in 2D$ ,$\tau_2 \in 6C$,$\tau_3 \in 6F$,$\tau_4 \in 2D$ where

$$\tau_1 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 1&1&0&1&1&0&0\\ 1&0&1&1&1&0&0\\ 1&0&0&0&1&0&0\\ 1&0&0&1&0&0&0\\ 1&1&0&1&0&0&1\\ 1&1&0&1&0&1&0 \end{pmatrix}, \tau_2 = \begin{pmatrix} 1&0&1&1&1&1&1\\ 1&1&0&0&1&1&1\\ 1&1&1&1&0&0&0\\ 1&0&1&0&0&0&0\\ 1&1&0&1&1&0&0\\ 1&1&1&1&1&0&1\\ 1&1&1&1&1&1&0 \end{pmatrix}, \tau_3 = \begin{pmatrix} 1&1&0&0&1&1&1\\ 0&1&0&1&0&0&0\\ 1&1&0&1&1&1&1\\ 0&1&0&0&1&1&1\\ 1&1&1&1&0&1&1\\ 0&0&1&0&1&1&0\\ 0&0&1&0&1&0&1 \end{pmatrix}$$

$$\tau_4=\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&1&0&1&1\\ 0&0&0&1&0&0&0\\ 0&0&0&1&1&1&1\\ 1&1&0&0&0&1&0\\ 1&1&0&0&0&0&1 \end{pmatrix}$$

- $\langle \zeta_1, \zeta_2, \zeta_3 \rangle = (2^2 \times 2^2).S_4$, $\zeta_1 \in 2A$ ,$\zeta_2 \in 4C$,$\zeta_3 \in 4C$ where

$$\zeta_1=\begin{pmatrix} 1&0&0&1&1&0&0\\ 1&1&1&0&0&0&0\\ 1&1&1&0&1&0&0\\ 1&0&1&0&1&0&0\\ 1&0&1&1&0&0&0\\ 0&0&1&0&0&1&0\\ 0&0&1&0&0&0&1 \end{pmatrix}, \zeta_2=\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&0&0&1&0&0&0\\ 0&1&1&1&0&0&0\\ 1&1&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 0&1&0&1&1&1&0\\ 0&1&0&1&1&0&1 \end{pmatrix}, \zeta_3=\begin{pmatrix} 1&0&1&1&0&0&0\\ 1&0&0&1&0&0&0\\ 0&0&0&1&0&0&0\\ 1&1&1&1&0&0&0\\ 0&1&0&0&1&0&0\\ 0&1&0&1&1&1&0\\ 0&1&0&1&1&0&1 \end{pmatrix}$$

- $\langle \eta_1, \eta_2, \eta_3 \rangle = S_6$, $\eta_1 \in 2E$ ,$\eta_2 \in 6E$,$\eta_3 \in 6E$ where

$$\eta_1=\begin{pmatrix} 1&0&0&0&10&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&1&0&0&1&0&0\\ 0&1&0&0&0&1&0\\ 0&1&0&0&0&0&1 \end{pmatrix}, \eta_2=\begin{pmatrix} 1&1&0&0&0&1&1\\ 0&0&1&0&1&1&1\\ 0&1&0&0&1&1&1\\ 0&0&1&1&1&0&0\\ 1&0&0&1&0&0&0\\ 1&1&1&1&0&0&1\\ 1&1&1&1&0&1&0 \end{pmatrix}, \eta_3=\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&0&0&1&1&1&1\\ 0&0&1&1&1&0&0\\ 0&1&0&0&1&1&1\\ 1&0&0&1&0&0&0\\ 1&0&0&0&0&1&0\\ 1&0&0&0&0&0&1 \end{pmatrix}$$

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### 7.3.3 The fusions of the inertia factor groups into $2^5 : S_6$

We obtain the fusions of the inertia factors $\bar{H}_i$'s ,$i = 3, 4, ..., 8$ , into $2^5 : S_6$ by using direct matrix conjugation in $2^5 : S_6$ and the permutation characters of the inertia factor groups in $2^5 : S_6$ of degrees $12, 16, 16, 20, 30$ and $32$ respectively. MAGMA was used for the various computations. These fusion maps of the inertia factor groups into $2^5 : S_6$ are shown in the tables below.

Table 7.22: The fusion of $2^4 : S_5$ into $2^5 : S_6$

| $[\bar{h}]_{2^4:S_5}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{2^4:S_5}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{2^4:S_5}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|---|
| $1A$ | | $1A$ | $3A$ | | $3A$ | $5A$ | | $5A$ |
| $2A$ | | $2B$ | $4A$ | | $4A$ | $6A$ | | $6C$ |
| $2B$ | | $2C$ | $4B$ | | $4B$ | $6B$ | | $6B$ |
| $2C$ | | $2E$ | $4C$ | | $4C$ | $6C$ | | $6E$ |
| $2D$ | | $2J$ | $4D$ | | $8A$ | $6B$ | | $8B$ |
| $2E$ | | $2H$ | $4E$ | | $4F$ | $12A$ | | $12B$ |

Table 7.23: The fusion of $\bar{H}_4 = S_6 \times 2$ into $2^5 : S_6$

| $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | $2F$ | $2I$ | $4C$ | $4J$ | $6D$ | $6G$ |
| $2A$ | $2A$ | $2G$ | $2J$ | $4D$ | $4I$ | $6E$ | $6F$ |
| $2B$ | $2F$ | $3A$ | $3A$ | $5A$ | $5A$ | $6F$ | $6E$ |
| $2C$ | $2D$ | $3B$ | $3B$ | $6A$ | $6D$ | $10A$ | $10A$ |
| $2D$ | $2E$ | $4A$ | $4F$ | $6B$ | $6A$ | | |
| $2E$ | $2G$ | $4B$ | $4H$ | $6C$ | $6H$ | | |

Table 7.24: The fusion of $\bar{H}_5 = S_6 \times 2$ into $2^5 : S_6$

| $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6\times 2}$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | $2F$ | $2I$ | $4C$ | $4F$ | $6D$ | $6G$ |
| $2A$ | $2A$ | $2G$ | $2J$ | $4D$ | $4H$ | $6E$ | $6E$ |
| $2B$ | $2F$ | $3A$ | $3A$ | $5A$ | $5A$ | $6F$ | $6F$ |
| $2C$ | $2E$ | $3B$ | $3B$ | $6A$ | $6D$ | $10A$ | $10A$ |
| $2D$ | $2D$ | $4A$ | $4J$ | $6B$ | $6A$ | | |
| $2E$ | $2G$ | $4B$ | $4I$ | $6C$ | $6H$ | | |

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Table 7.25: The fusion of $(S_4 \times S_4) : 2$ into $2^5 : S_6$

| $[\bar{h}]_{(S_4\times S_4):2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(S_4\times S_4):2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(S_4\times S_4):2}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(S_4\times S_4):2}$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | $2E$ | $2H$ | $4B$ | $4D$ | $6A$ | $6C$ |
| $2A$ | $2C$ | $2F$ | $2J$ | $4C$ | $4A$ | $6B$ | $6E$ |
| $2B$ | $2B$ | $3A$ | $3A$ | $4D$ | $4G$ | $6C$ | $6H$ |
| $2C$ | $2E$ | $3B$ | $3B$ | $4E$ | $4E$ | $8A$ | $8A$ |
| $2D$ | $2F$ | $4A$ | $4B$ | $4F$ | $4I$ | $12A$ | $12A$ |

Table 7.26: The fusion of $(2^2 \times 2^2).S_4$ into $2^5 : S_6$

| $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | $2M$ | $2J$ | $2Z$ | $2H$ | $4K$ | $4H$ |
| $2A$ | $2C$ | $2N$ | $2H$ | $2AA$ | $2H$ | $4L$ | $4B$ |
| $2B$ | $2D$ | $2O$ | $2F$ | $3A$ | $3A$ | $4M$ | $4J$ |
| $2C$ | $2E$ | $2P$ | $2G$ | $4A$ | $4C$ | $4N$ | $4F$ |
| $2D$ | $2D$ | $2Q$ | $2F$ | $4B$ | $4D$ | $4O$ | $4A$ |
| $2E$ | $2B$ | $2R$ | $2G$ | $4C$ | $4E$ | $4P$ | $4J$ |
| $2F$ | $2A$ | $2S$ | $2I$ | $4D$ | $4E$ | $6A$ | $6A$ |
| $2G$ | $2E$ | $2T$ | $2J$ | $4E$ | $4F$ | $6B$ | $6E$ |
| $2H$ | $2H$ | $2U$ | $2D$ | $4F$ | $4H$ | $6C$ | $6E$ |
| $2I$ | $2C$ | $2V$ | $2I$ | $4G$ | $4I$ | $6D$ | $6F$ |
| $2J$ | $2B$ | $2W$ | $2E$ | $4H$ | $4G$ | $6E$ | $6B$ |
| $2K$ | $2I$ | $2X$ | $2I$ | $4I$ | $4I$ | $6F$ | $6C$ |
| $2L$ | $2J$ | $2Y$ | $2J$ | $4J$ | $4G$ | $6G$ | $6F$ |

Table 7.27: The fusion of $S_6$ into $2^5 : S_6$

| $[\tilde{h}]_{S_6}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\tilde{h}]_{S_6}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\tilde{h}]_{S_6}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|---|
| $1A$ | | $1A$ | $3A$ | | $3B$ | $5A$ | | $5A$ |
| $2A$ | | $2F$ | $3B$ | | $3A$ | $6A$ | | $6E$ |
| $2B$ | | $2E$ | $4A$ | | $4F$ | $6B$ | | $6H$ |
| $2C$ | | $2J$ | $4B$ | | $4I$ | | | |

### 7.3.4 The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$

The Fischer-Clifford matrices of $2^7 : (2^5 : S_6)$ were constructed by using the properties of Fischer-Clifford matrices which are given in Chapter 5 together with the fusions maps of the inertia factor groups into $2^5 : S_6$. Note each conjugacy class $[q]$ of $2^5 : S_6$ with representative $q \in 2^5 : S_6$ corresponds to a Fischer-Clifford matrix $M(q)$ of $2^7 : (2^5 : S_6)$ . See the example in Section 7.1.4 for the detailed calculations of Fischer-Clifford matrices for a split extension group.

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Table 7.28: The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$

| $M(q)$ | $M(q)$ |
|---|---|
| $M(1A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & -1 \\ 12 & 12 & -12 & -12 & 4 & -4 & 0 & 0 \\ 16 & -16 & 16 & -16 & 0 & 0 & -4 & 4 \\ 16 & -16 & 16 & -16 & 0 & 0 & 4 & -4 \\ 20 & 20 & -20 & -20 & -4 & 4 & 0 & 0 \\ 30 & 30 & 30 & 30 & -2 & -2 & 0 & 0 \\ 32 & -32 & -32 & 32 & 0 & 0 & 0 & 0 \end{pmatrix}$ | $M(2A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 \\ 16 & -16 & 4 & -4 & 0 \\ 16 & -16 & -4 & 4 & 0 \\ 30 & 30 & 0 & 0 & -2 \end{pmatrix}$ |
| $M(2B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & -1 \\ 4 & -4 & -4 & 4 & 0 & 0 \\ 12 & -12 & 4 & -4 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & 0 \\ 12 & 12 & -4 & -4 & 0 & 0 \end{pmatrix}$ | $M(2C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & -1 \\ 8 & -8 & -4 & 4 & 0 & 0 \\ 8 & -8 & 4 & -4 & 0 & 0 \\ 2 & 2 & -2 & -2 & 2 & 0 \\ 12 & 12 & 0 & 0 & -4 & 0 \end{pmatrix}$ |
| $M(2D) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 8 & -8 & -4 & 4 & 0 & 0 & 0 \\ 8 & -8 & 4 & -4 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 12 & 12 & 0 & 0 & -4 & 0 & 0 \end{pmatrix}$ | $M(2E) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & -1 \\ 8 & -8 & 8 & -8 & 4 & -4 & 0 & 0 & 0 & 0 \\ 8 & -8 & -8 & 8 & 0 & 0 & -4 & 4 & 0 & 0 \\ 8 & -8 & 8 & -8 & -4 & 4 & 0 & 0 & 0 & 0 \\ 8 & -8 & -8 & 8 & 0 & 0 & 4 & -4 & 0 & 0 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 \\ 12 & 12 & 12 & 12 & 0 & 0 & 0 & 0 & -4 & 0 \\ 16 & 16 & -16 & -16 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$ |

Table 7.28: The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$(continued)

| $M(q)$ | $M(q)$ |
|---|---|
| $M(2F) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 \\ 4 & -4 & 4 & -4 & 4 & -4 & 0 & 0 \\ 4 & -4 & 4 & -4 & -4 & 4 & 0 & 0 \\ 8 & -8 & -8 & 8 & 0 & 0 & 0 & 0 \\ 3 & 3 & 3 & 3 & -3 & -3 & -1 & 1 \\ 3 & 3 & 3 & 3 & 3 & 3 & -1 & -1 \\ 8 & 8 & -8 & -8 & 0 & 0 & 0 & 0 \end{pmatrix}$ | $M(2G) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 \\ 4 & -4 & 4 & -4 & 0 & 0 \\ 4 & 4 & -4 & -4 & 0 & 0 \\ 3 & 3 & 3 & 3 & -1 & -1 \\ 3 & -3 & -3 & 3 & -1 & 1 \end{pmatrix}$ |
| $M(2H) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 \\ 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 \\ 2 & -2 & -2 & 2 & -2 & 2 & 0 & 0 \end{pmatrix}$ | $M(2I) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 \\ 4 & -4 & -4 & 4 & 0 & 0 & 0 & 0 \\ 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & 2 & -2 & -2 & -2 & 2 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(2J) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 4 & -4 & 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 & 0 \\ 4 & -4 & -4 & 4 & 0 & 0 & 4 & -4 & 0 & 0 & 0 \\ 4 & -4 & 4 & -4 & -4 & 4 & 0 & 0 & 0 & 0 & 0 \\ 4 & -4 & -4 & 4 & 0 & 0 & -4 & 4 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 \\ 2 & 2 & 2 & 2 & -2 & -2 & 2 & 2 & -2 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & -2 & -2 & 2 & 0 & 0 \\ 8 & 8 & -8 & -8 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$ | $M(3A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 6 & 6 & -6 & -6 & 2 & -2 & 0 & 0 \\ 4 & -4 & 4 & -4 & 0 & 0 & -2 & 2 \\ 4 & -4 & 4 & -4 & 0 & 0 & 2 & -2 \\ 2 & 2 & -2 & -2 & -2 & 2 & 0 & 0 \\ 6 & 6 & 6 & 6 & -2 & -2 & 0 & 0 \\ 8 & -8 & -8 & 8 & 0 & 0 & 0 & 0 \end{pmatrix}$ |
| $M(3B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & -1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 \\ 2 & 2 & -2 & -2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ | $M(4A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 \\ 2 & -2 & -2 & 2 & 0 \\ 6 & -6 & 2 & -2 & 0 \\ 6 & 6 & -2 & -2 & 0 \end{pmatrix}$ |
| $M(4B) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 \\ 6 & -6 & 2 & -2 & 0 \\ 2 & -2 & -2 & 2 & 0 \\ 6 & 6 & -2 & -2 & 0 \end{pmatrix}$ | $M(4C) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & -1 \\ 4 & -4 & 0 & 0 \\ 2 & 2 & -2 & 0 \end{pmatrix}$ |
| $M(4D) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & -1 \\ 4 & -4 & 0 & 0 \\ 2 & 2 & -2 & 0 \end{pmatrix}$ | $M(4E) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & -1 & -1 \\ 4 & -4 & 0 & 0 & 0 \\ 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & 1 \end{pmatrix}$ |
| $M(4F) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 \\ 4 & -4 & -4 & 4 & 0 & 0 & 0 & 0 \\ 2 & -2 & 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & -2 & 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 \end{pmatrix}$ | $M(4G) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \end{pmatrix}$ |
| $M(4H) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 \end{pmatrix}$ | $M(4I) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 2 & -2 & 0 & 0 \\ 4 & -4 & -4 & 4 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 \end{pmatrix}$ |
| $M(4J) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(5A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(6A) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 \\ 4 & -4 & 2 & -2 & 0 \\ 4 & -4 & -2 & 2 & 0 \\ 6 & 6 & 0 & 0 & -2 \end{pmatrix}$ | $M(6B) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & -1 \\ 4 & -4 & 0 & 0 \\ 2 & 2 & -2 & 0 \end{pmatrix}$ |

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Table 7.28 : The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$(continue)

| $M(q)$ | $M(q)$ |
|---|---|
| $M(6C) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 \\ 2 & 2 & -2 & -2 & 0 \\ 2 & -2 & 2 & -2 & 0 \\ 2 & -2 & -2 & 2 & 0 \end{pmatrix}$ | $M(6D) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 \end{pmatrix}$ |
| $M(6E) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & -1 & 1 & -1 & -1 \\ 2 & 2 & -2 & -2 & 0 & -2 & 0 & 2 & 0 \\ 2 & -2 & 2 & -2 & -2 & 0 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & 0 & 2 & 0 & -2 & 0 \\ 2 & -2 & 2 & -2 & 2 & 0 & -2 & 0 & 0 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 4 & -4 & -4 & 4 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$ | $M(6F) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(6G) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 \end{pmatrix}$ | $M(6H) = \begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & 2 & -2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(8A) = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & -1 \\ 2 & -2 & 0 \end{pmatrix}$ | $M(8B) = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & -1 \\ 2 & -2 & 0 \end{pmatrix}$ |
| $M(10A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 \end{pmatrix}$ | $M(12A) = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & -1 \\ 2 & -2 & 0 \end{pmatrix}$ |
| $M(12B) = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & -1 \\ 2 & -2 & 0 \end{pmatrix}$ | |

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### 7.3.5 Character Table of $2^7 : (2^5 : S_6)$

The character table of $G = 2^7 : (2^5 : S_6)$ was constructed through the above Fischer-Clifford Matrices and the character tables of the 8 inertia factors groups together with their respective fusions maps into $2^5 : S_6$.We partitioned the set of irreducible characters of $G = 2^7 : (2^5 : S_6)$ into 6 blocks $B_1$,$B_2$,$B_3$,$B_4$,$B_5$, $B_6$,$B_7$ and $B_8$ corresponding to the inertia factor groups $\bar{H}_1$ , $\bar{H}_2$ , $\bar{H}_3$, $\bar{H}_4$ , $\bar{H}_5$ , $\bar{H}_6$, $\bar{H}_7$ and $\bar{H}_8$, respectively. Therefore $Irr(G = 2^7 : (2^5 : S_6)) = \bigcup_{i=1}^{8} B_i$, where $B_1 = \{\chi_j | 1 \leq j \leq 37\}$, $B_2 = \{\chi_j | 38 \leq j \leq 74\}$, $B_3 = \{\chi_j | 75 \leq j \leq 92\}$, $B_4 = \{\chi_j | 93 \leq j \leq 114\}$, $B_5 = \{\chi_j | 115 \leq j \leq 136\}$, $B_6 = \{\chi_j | 137 \leq j \leq 156\}$, $B_7 = \{\chi_j | 157 \leq j \leq 208\}$ and $B_8 = \{\chi_j | 209 \leq j \leq 219\}$. The complete character table is given in Table 7.29 .

Table 7.29: charactertable of $2^7 : (2^5 : S_6)$

| | 1A | | | | | | | | 2A | | | | | 2B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1A | 2A | 2B | 2C | 2D | 2E | 2F | 2G | 2H | 2I | 4A | 4B | 2J | 2K | 2L | 2M | 2N | 4C | 4D |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_4$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_5$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_6$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_7$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | -6 | -6 | -6 | -6 | -6 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_8$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | -6 | -6 | -6 | -6 | -6 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_9$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{10}$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{11}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{12}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{14}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{15}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{16}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{17}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| $\chi_{22}$ | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | -20 | -20 | -20 | -20 | -20 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{23}$ | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | -24 | -24 | -24 | -24 | -24 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{24}$ | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | -24 | -24 | -24 | -24 | -24 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{25}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | -30 | -30 | -30 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{26}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | -30 | -30 | -30 | -10 | -10 | -10 | -10 | -10 | -10 |
| $\chi_{27}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{28}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{29}$ | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | -36 | -36 | -36 | -36 | -36 | -12 | -12 | -12 | -12 | -12 | -12 |
| $\chi_{30}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{31}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{32}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{33}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{34}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{35}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{36}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{39}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{40}$ | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 |
| $\chi_{41}$ | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 |
| $\chi_{42}$ | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 |
| $\chi_{43}$ | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 |
| $\chi_{44}$ | 6 | 6 | 6 | 6 | 6 | 6 | -6 | -6 | -6 | -6 | 6 | 6 | -6 | -2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{45}$ | 6 | 6 | 6 | 6 | 6 | 6 | -6 | -6 | -6 | -6 | 6 | 6 | -6 | -2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{46}$ | 9 | 9 | 9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 | 9 | 9 | -9 |
| $\chi_{47}$ | 9 | 9 | 9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 | 9 | 9 | -9 |
| $\chi_{48}$ | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{49}$ | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{50}$ | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{51}$ | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{52}$ | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 |
| $\chi_{53}$ | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 |
| $\chi_{54}$ | 15 | 15 | 15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -15 | 15 | -1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{55}$ | 15 | 15 | 15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -15 | 15 | -1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{56}$ | 15 | 15 | 15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -15 | 15 | -1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{57}$ | 15 | 15 | 15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -15 | 15 | -1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{58}$ | 16 | 16 | 16 | 16 | 16 | 16 | -16 | -16 | 16 | 16 | -16 | -16 | 16 | 16 | 16 | 16 | 16 | 16 | -16 |
| $\chi_{59}$ | 20 | 20 | 20 | 20 | 20 | 20 | -20 | -20 | -20 | -20 | 20 | 20 | -20 | 4 | 4 | 4 | 4 | 4 | -4 |
| $\chi_{60}$ | 24 | 24 | 24 | 24 | 24 | 24 | -24 | -24 | -24 | -24 | 24 | 24 | -24 | -8 | -8 | -8 | -8 | -8 | 8 |
| $\chi_{61}$ | 24 | 24 | 24 | 24 | 24 | 24 | -24 | -24 | -24 | -24 | 24 | 24 | -24 | -8 | -8 | -8 | -8 | -8 | 8 |
| $\chi_{62}$ | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | -30 | -30 | 30 | 30 | -30 | -10 | -10 | -10 | -10 | -10 | 10 |
| $\chi_{63}$ | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | -30 | -30 | 30 | 30 | -30 | -10 | -10 | -10 | -10 | -10 | 10 |
| $\chi_{64}$ | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | -30 | 30 | -2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{65}$ | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | -30 | 30 | -2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{66}$ | 36 | 36 | 36 | 36 | 36 | 36 | -36 | -36 | -36 | -36 | 36 | 36 | -36 | -12 | -12 | -12 | -12 | -12 | 12 |
| $\chi_{67}$ | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 8 | 8 | 8 | 8 | 8 | -8 |
| $\chi_{68}$ | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 8 | 8 | 8 | 8 | 8 | -8 |
| $\chi_{69}$ | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 8 | 8 | 8 | 8 | 8 | -8 |
| $\chi_{70}$ | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 8 | 8 | 8 | 8 | 8 | -8 |
| $\chi_{71}$ | 45 | 45 | 45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -45 | 45 | -3 | -3 | -3 | -3 | -3 | 3 |
| $\chi_{72}$ | 45 | 45 | 45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -45 | 45 | -3 | -3 | -3 | -3 | -3 | 3 |
| $\chi_{73}$ | 45 | 45 | 45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -45 | 45 | -3 | -3 | -3 | -3 | -3 | 3 |
| $\chi_{74}$ | 45 | 45 | 45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -45 | 45 | -3 | -3 | -3 | -3 | -3 | 3 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2C$ | | | | | | $2D$ | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2O$ | $2P$ | $4E$ | $4F$ | $2Q$ | $4G$ | $2R$ | $2S$ | $4H$ | $4I$ | $2T$ | $4J$ | $4K$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 5 | 5 | 5 | 5 | 5 | 5 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_4$ | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_5$ | 5 | 5 | 5 | 5 | 5 | 5 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 2 | 2 | 2 | 2 | 2 | 2 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_8$ | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_9$ | 9 | 9 | 9 | 9 | 9 | 9 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 9 | 9 | 9 | 9 | 9 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | -2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{13}$ | -2 | -2 | -2 | -2 | -2 | -2 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{14}$ | -2 | -2 | -2 | -2 | -2 | -2 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{15}$ | 10 | 10 | 10 | 10 | 10 | 10 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 10 | 10 | 10 | 10 | 10 | 10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | -7 | -7 | -7 | -7 | -7 | -7 | -7 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| $\chi_{21}$ | 16 | 16 | 16 | 16 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{24}$ | 8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{25}$ | 10 | 10 | 10 | 10 | 10 | 10 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{26}$ | 10 | 10 | 10 | 10 | 10 | 10 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{27}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{28}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{29}$ | 12 | 12 | 12 | 12 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{31}$ | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{32}$ | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{35}$ | -3 | -3 | -3 | -3 | -3 | -3 | -9 | -9 | -9 | -9 | -9 | -9 | -9 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{39}$ | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{40}$ | 5 | 5 | 5 | 5 | 5 | -5 | -3 | -3 | 3 | 3 | -3 | 3 | -3 |
| $\chi_{41}$ | 5 | 5 | 5 | 5 | 5 | -5 | 3 | 3 | -3 | -3 | 3 | -3 | 3 |
| $\chi_{42}$ | 5 | 5 | 5 | 5 | 5 | -5 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{43}$ | 5 | 5 | 5 | 5 | 5 | -5 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{44}$ | 2 | 2 | 2 | 2 | 2 | -2 | -4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{45}$ | 2 | 2 | 2 | 2 | 2 | -2 | 4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{46}$ | 9 | 9 | 9 | 9 | 9 | -9 | -3 | -3 | 3 | 3 | -3 | 3 | -3 |
| $\chi_{47}$ | 9 | 9 | 9 | 9 | 9 | -9 | 3 | 3 | -3 | -3 | 3 | -3 | 3 |
| $\chi_{48}$ | -2 | -2 | -2 | -2 | -2 | 2 | 4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{49}$ | -2 | -2 | -2 | -2 | -2 | 2 | 4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{50}$ | -2 | -2 | -2 | -2 | -2 | 2 | -4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{51}$ | -2 | -2 | -2 | -2 | -2 | 2 | -4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{52}$ | 10 | 10 | 10 | 10 | 10 | -10 | -2 | -2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{53}$ | 10 | 10 | 10 | 10 | 10 | -10 | 2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{54}$ | -1 | -1 | -1 | -1 | -1 | 1 | -5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{55}$ | -1 | -1 | -1 | -1 | -1 | 1 | 5 | 5 | -5 | -5 | 5 | -5 | 5 |
| $\chi_{56}$ | -1 | -1 | -1 | -1 | -1 | 1 | -7 | -7 | 7 | 7 | -7 | 7 | -7 |
| $\chi_{57}$ | -1 | -1 | -1 | -1 | -1 | 1 | 7 | 7 | -7 | -7 | 7 | -7 | 7 |
| $\chi_{58}$ | 16 | 16 | 16 | 16 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | -4 | -4 | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 8 | 8 | 8 | 8 | 8 | -8 | 8 | 8 | -8 | -8 | 8 | -8 | 8 |
| $\chi_{61}$ | 8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 | -8 |
| $\chi_{62}$ | 10 | 10 | 10 | 10 | 10 | -10 | -4 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{63}$ | 10 | 10 | 10 | 10 | 10 | -10 | 4 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{64}$ | -2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{65}$ | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{66}$ | 12 | 12 | 12 | 12 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | -8 | -8 | -8 | -8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 | 8 | -8 |
| $\chi_{68}$ | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 | 8 |
| $\chi_{69}$ | -8 | -8 | -8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | -8 | -8 | -8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | -3 | -3 | -3 | -3 | 3 | 9 | 9 | -9 | -9 | 9 | -9 | 9 |
| $\chi_{72}$ | -3 | -3 | -3 | -3 | -3 | 3 | -9 | -9 | 9 | 9 | -9 | 9 | -9 |
| $\chi_{73}$ | -3 | -3 | -3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 |
| $\chi_{74}$ | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2E$ | | | | | | | | | | $2F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2U$ | $2V$ | $2W$ | $2X$ | $4L$ | $4M$ | $4N$ | $4O$ | $2Y$ | $2Z$ | $2AA$ | $2AB$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $4P$ | $4Q$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_4$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_7$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{12}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{13}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{14}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{16}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{18}$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{19}$ | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{20}$ | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{34}$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{35}$ | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{39}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{40}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{41}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{42}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{43}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{44}$ | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{47}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{48}$ | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 |
| $\chi_{49}$ | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 |
| $\chi_{50}$ | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 |
| $\chi_{51}$ | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 |
| $\chi_{52}$ | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{53}$ | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{54}$ | -5 | -5 | -5 | -5 | 5 | 5 | -5 | -5 | -5 | 5 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{55}$ | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | -5 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{56}$ | -7 | -7 | -7 | -7 | 7 | 7 | -7 | -7 | -7 | 7 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{57}$ | 7 | 7 | 7 | 7 | -7 | -7 | 7 | 7 | 7 | -7 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | -8 | -8 | -8 | -8 | 8 | 8 | -8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 8 | 8 | 8 | 8 | -8 | -8 | 8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | -6 | -6 | -6 | -6 | 6 | 6 | -6 | 6 |
| $\chi_{65}$ | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 6 | 6 | 6 | 6 | -6 | -6 | 6 | -6 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 8 | 8 | 8 | 8 | -8 | -8 | 8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | -8 | -8 | -8 | -8 | 8 | 8 | -8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 |
| $\chi_{71}$ | 9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | -9 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{72}$ | -9 | -9 | -9 | -9 | 9 | 9 | -9 | -9 | -9 | 9 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{73}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{74}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2G$ | | | | | | $2H$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AG$ | $4R$ | $4S$ | $2AH$ | $4T$ | $4U$ | $2AI$ | $4V$ | $4W$ | $2AJ$ | $4X$ | $4Y$ | $4Z$ | $4AA$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_5$ | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{17}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{18}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{19}$ | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | -6 | -6 | -6 | -6 | -6 | -6 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{28}$ | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{35}$ | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{37}$ | 3 | 3 | 3 | 3 | 3 | 3 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{38}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{40}$ | 1 | -1 | -1 | 1 | 1 | -1 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{41}$ | -1 | 1 | 1 | -1 | -1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{42}$ | 3 | -3 | -3 | 3 | 3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{43}$ | -3 | 3 | 3 | -3 | -3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{47}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{48}$ | 4 | -4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -4 | 4 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 4 | -4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | -4 | 4 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | 2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{53}$ | -2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{54}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{55}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{56}$ | -3 | 3 | 3 | -3 | -3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{57}$ | 3 | -3 | -3 | 3 | 3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | -6 | 6 | 6 | -6 | -6 | 6 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{65}$ | 6 | -6 | -6 | 6 | 6 | -6 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 8 | -8 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | -8 | 8 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | 3 | 3 | -3 | -3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{72}$ | 3 | -3 | -3 | 3 | 3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{73}$ | -3 | 3 | 3 | -3 | -3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 |
| $\chi_{74}$ | 3 | -3 | -3 | 3 | 3 | -3 | -5 | -5 | -5 | -5 | -5 | -5 | 5 | 5 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2I$ | | | | | | | | $2J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AK$ | $2AL$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $4AG$ | $2AM$ | $2AN$ | $2AO$ | $2AP$ | $4AH$ | $4AI$ | $4AJ$ | $4AK$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_8$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{14}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{20}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{26}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{29}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{35}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{38}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{39}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{40}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{41}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{42}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{43}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{44}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{45}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{46}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{47}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{48}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{49}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{50}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{51}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{52}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{53}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{54}$ | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{55}$ | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{56}$ | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{57}$ | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{63}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{64}$ | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{65}$ | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{66}$ | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{72}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{73}$ | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{74}$ | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 2J | | | 3A | | | | | | | | 3B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2AQ | 4AL | 4AM | 3A | 6A | 6B | 6C | 6D | 6E | 6F | 6G | 3B | 6H | 6I | 6J | 6K | 6L |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_7$ | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{13}$ | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{14}$ | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{15}$ | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{17}$ | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{22}$ | -4 | -4 | -4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{23}$ | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{31}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{32}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{33}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{34}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | 1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{40}$ | 1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{41}$ | 1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{42}$ | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{43}$ | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{44}$ | 2 | -2 | -2 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 2 | -2 | -2 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{49}$ | 2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{50}$ | 2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{51}$ | 2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{52}$ | -2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{53}$ | -2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{54}$ | -1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | -1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | 3 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | 3 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{59}$ | -4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{60}$ | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 2 | -2 | -2 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 2 | -2 | -2 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 2 | -2 | -2 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 2 | -2 | -2 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{68}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{69}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{70}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{71}$ | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $4A$ | | | | | $4B$ | | | | | $4C$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AN$ | $4AO$ | $4AP$ | $4AQ$ | $8A$ | $4AR$ | $4AS$ | $4AT$ | $4AU$ | $8B$ | $4AV$ | $4AW$ | $4AX$ | $4AY$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 |
| $\chi_4$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_8$ | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 |
| $\chi_{13}$ | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{14}$ | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 |
| $\chi_{18}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| $\chi_{19}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 |
| $\chi_{23}$ | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{26}$ | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{28}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 |
| $\chi_{30}$ | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{35}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{39}$ | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{40}$ | -3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 1 | 1 | 1 | -1 |
| $\chi_{41}$ | 3 | 3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | 1 | 1 | 1 | -1 |
| $\chi_{42}$ | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{43}$ | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{44}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{45}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{46}$ | -3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 1 | 1 | 1 | -1 |
| $\chi_{47}$ | 3 | 3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | 1 | 1 | 1 | -1 |
| $\chi_{48}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{49}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{50}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{51}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{52}$ | -2 | -2 | -2 | -2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{53}$ | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{54}$ | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 3 | 3 | 3 | -3 |
| $\chi_{55}$ | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 3 | 3 | 3 | -3 |
| $\chi_{56}$ | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{57}$ | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | -4 |
| $\chi_{60}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{63}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{64}$ | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{65}$ | -2 | -2 | -2 | -2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | 4 |
| $\chi_{67}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 |
| $\chi_{72}$ | 3 | 3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 |
| $\chi_{73}$ | -3 | -3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 1 | 1 | 1 | -1 |
| $\chi_{74}$ | 3 | 3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | 1 | 1 | 1 | -1 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $4D$ | | | | $4E$ | | | | | $4F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AZ$ | $4BA$ | $4BB$ | $4BC$ | $4BD$ | $4BE$ | $4BF$ | $4BG$ | $4BH$ | $4BI$ | $4BJ$ | $4BK$ | $4BL$ | $4BM$ | $4BN$ | $8C$ | $8D$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_8$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_9$ | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{11}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{26}$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{35}$ | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{36}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{38}$ | 1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{39}$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{40}$ | 1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{41}$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{42}$ | 1 | 1 | 1 | -1 | 3 | 3 | 3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{43}$ | 1 | 1 | 1 | -1 | -3 | -3 | -3 | 3 | 3 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{44}$ | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{45}$ | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{46}$ | 1 | 1 | 1 | -1 | -3 | -3 | -3 | 3 | 3 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{47}$ | 1 | 1 | 1 | -1 | 3 | 3 | 3 | -3 | -3 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{48}$ | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 3 | 3 | 3 | -3 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{55}$ | 3 | 3 | 3 | -3 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{56}$ | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{57}$ | -1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{63}$ | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{64}$ | 2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | -3 | -3 | 3 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{72}$ | -3 | -3 | -3 | 3 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{73}$ | 1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{74}$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4G | | | | | | 4H | | | | | | 4I | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4BO | 4BP | 4BQ | 4BR | 8E | 8F | 4BS | 4BT | 4BU | 4BV | 8G | 8H | 4BW | 4BX | 4BY | 4BZ | 4CA |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{35}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{36}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{39}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{40}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{41}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{42}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{43}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{47}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{52}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{55}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{56}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{57}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{72}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{73}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{74}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4I | | | 4J | | | | | | 5A | | | | | | 6A | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4CB | 8I | 8J | 4CC | 4CD | 4CE | 4CF | 8K | 8L | 5A | 10A | 10B | 10C | 10D | 10E | 6M | 6N |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_4$ | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_5$ | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_6$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 |
| $\chi_8$ | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{10}$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{11}$ | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{12}$ | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{13}$ | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{14}$ | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{18}$ | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{19}$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{20}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -3 | -3 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -3 | -3 |
| $\chi_{25}$ | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{26}$ | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{34}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{39}$ | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{40}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{41}$ | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{42}$ | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{43}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | -2 | -2 | 2 | 2 | -2 | 2 | 1 | 1 | 1 | 1 | -1 | -1 | -3 | -3 |
| $\chi_{45}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | 1 | 1 | 1 | 1 | -1 | -1 | -3 | -3 |
| $\chi_{46}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{47}$ | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 |
| $\chi_{48}$ | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{49}$ | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{50}$ | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{51}$ | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{54}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{55}$ | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{56}$ | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{57}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -2 | -2 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -3 | -3 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -3 | -3 |
| $\chi_{62}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{63}$ | 0 | 0 | 0 | -2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| $\chi_{71}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6A$ | | | $6B$ | | | | $6C$ | | | | | $6D$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $12A$ | $12B$ | $6O$ | $6P$ | $6Q$ | $12C$ | $12D$ | $6R$ | $12E$ | $12F$ | $6S$ | $12G$ | $6T$ | $6U$ | $12H$ | $12I$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 |
| $\chi_6$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 |
| $\chi_7$ | -3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_8$ | -3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{12}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{13}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{17}$ | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{22}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 |
| $\chi_{23}$ | -3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | -3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 3 | 3 | 3 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| $\chi_{31}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| $\chi_{32}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 |
| $\chi_{33}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{40}$ | -2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | 2 | -2 | -1 | -1 | 1 | 1 |
| $\chi_{41}$ | -2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | 2 | 2 | -2 | -1 | -1 | 1 | 1 |
| $\chi_{42}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 2 | 2 | -2 | -2 |
| $\chi_{43}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 2 | 2 | -2 | -2 |
| $\chi_{44}$ | 3 | 3 | -3 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 3 | 3 | -3 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{49}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{50}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{51}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{52}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{53}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{54}$ | -3 | -3 | 3 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | -3 | -3 | 3 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | -3 | -3 | 3 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | -3 | -3 | 3 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{59}$ | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{60}$ | 3 | 3 | -3 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 3 | 3 | -3 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -3 | -3 | 3 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | -3 | -3 | 3 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 3 | 3 | -3 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 3 | 3 | -3 | 1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 2 | 2 | -2 | -2 |
| $\chi_{68}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 2 | 2 | -2 | -2 |
| $\chi_{69}$ | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | -1 | -1 | 1 | 1 |
| $\chi_{70}$ | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | -1 | -1 | 1 | 1 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | | $6F$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6V$ | $6W$ | $6X$ | $6Y$ | $12J$ | $12K$ | $12L$ | $12M$ | $6Z$ | $6AA$ | $6AB$ | $12N$ | $12O$ | $12P$ | $12Q$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_4$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_8$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{24}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{25}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{26}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{27}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{28}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{31}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{39}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{43}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{44}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{45}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{49}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{50}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{51}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{52}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{53}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{54}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{55}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{56}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{57}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{61}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{62}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{63}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{64}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{65}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{68}$ | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6G$ | | | | $6H$ | | | | | | $8A$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $6AD$ | $12R$ | $12S$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8K$ | $8L$ | $8M$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| $\chi_6$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $\chi_{11}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{12}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{15}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{16}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{33}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| $\chi_{38}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{39}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{40}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{41}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 |
| $\chi_{48}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{49}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{50}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{51}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{52}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{53}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 |
| $\chi_{70}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $8B$ | | | $10A$ | | | | $12A$ | | | $12B$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8N$ | $8O$ | $8P$ | $10F$ | $10G$ | $20A$ | $20B$ | $12T$ | $12U$ | $24A$ | $12V$ | $12W$ | $24B$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_4$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_5$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_8$ | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_9$ | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{24}$ | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{29}$ | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | -1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{39}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{40}$ | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{43}$ | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{45}$ | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{46}$ | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{54}$ | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{55}$ | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{56}$ | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{57}$ | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{61}$ | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{66}$ | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $1A$ | | | | | | | | $2A$ | | | | | $2B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $2I$ | $4A$ | $4B$ | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ | $4C$ | $4D$ |
| $\chi_{75}$ | 12 | 12 | -12 | -12 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{76}$ | 12 | 12 | -12 | -12 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{77}$ | 48 | 48 | -48 | -48 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 |
| $\chi_{78}$ | 48 | 48 | -48 | -48 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 |
| $\chi_{79}$ | 60 | 60 | -60 | -60 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | 12 | 12 | -12 | 0 | 0 |
| $\chi_{80}$ | 60 | 60 | -60 | -60 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | 12 | 12 | -12 | 0 | 0 |
| $\chi_{81}$ | 60 | 60 | -60 | -60 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | -20 | -20 | 20 | 0 | 0 |
| $\chi_{82}$ | 60 | 60 | -60 | -60 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | -20 | -20 | 20 | 0 | 0 |
| $\chi_{83}$ | 72 | 72 | -72 | -72 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -24 | 24 | 0 | 0 |
| $\chi_{84}$ | 120 | 120 | -120 | -120 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 |
| $\chi_{85}$ | 120 | 120 | -120 | -120 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 |
| $\chi_{86}$ | 120 | 120 | -120 | -120 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 |
| $\chi_{87}$ | 120 | 120 | -120 | -120 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 |
| $\chi_{88}$ | 120 | 120 | -120 | -120 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 24 | -24 | 0 | 0 |
| $\chi_{89}$ | 180 | 180 | -180 | -180 | 60 | -60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -36 | 36 | 36 | -36 | 0 | 0 |
| $\chi_{90}$ | 180 | 180 | -180 | -180 | 60 | -60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -36 | 36 | 36 | -36 | 0 | 0 |
| $\chi_{91}$ | 240 | 240 | -240 | -240 | 80 | -80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 |
| $\chi_{92}$ | 240 | 240 | -240 | -240 | 80 | -80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 |
| $\chi_{93}$ | 16 | -16 | 16 | -16 | 0 | 0 | -4 | 4 | 16 | -16 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 16 | -16 | 16 | -16 | 0 | 0 | -4 | 4 | -16 | 16 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 16 | -16 | 16 | -16 | 0 | 0 | -4 | 4 | 16 | -16 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 16 | -16 | 16 | -16 | 0 | 0 | -4 | 4 | -16 | 16 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | 80 | -80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | -80 | 80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | 80 | -80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | -80 | 80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | -80 | 80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | -80 | 80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | 80 | -80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 80 | -80 | 80 | -80 | 0 | 0 | -20 | 20 | 80 | -80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 144 | -144 | 144 | -144 | 0 | 0 | -36 | 36 | 144 | -144 | 36 | -36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 144 | -144 | 144 | -144 | 0 | 0 | -36 | 36 | -144 | 144 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 144 | -144 | 144 | -144 | 0 | 0 | -36 | 36 | 144 | -144 | 36 | -36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 144 | -144 | 144 | -144 | 0 | 0 | -36 | 36 | -144 | 144 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 160 | -160 | 160 | -160 | 0 | 0 | -40 | 40 | -160 | 160 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 160 | -160 | 160 | -160 | 0 | 0 | -40 | 40 | -160 | 160 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 160 | -160 | 160 | -160 | 0 | 0 | -40 | 40 | 160 | -160 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 160 | -160 | 160 | -160 | 0 | 0 | -40 | 40 | 160 | -160 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 256 | -256 | 256 | -256 | 0 | 0 | -64 | 64 | 256 | -256 | 64 | -64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 256 | -256 | 256 | -256 | 0 | 0 | -64 | 64 | -256 | 256 | -64 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 16 | -16 | 16 | -16 | 0 | 0 | 4 | -4 | 16 | -16 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 16 | -16 | 16 | -16 | 0 | 0 | 4 | -4 | -16 | 16 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 16 | -16 | 16 | -16 | 0 | 0 | 4 | -4 | 16 | -16 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 16 | -16 | 16 | -16 | 0 | 0 | 4 | -4 | -16 | 16 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | 80 | -80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | -80 | 80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | 80 | -80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | -80 | 80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | -80 | 80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | -80 | 80 | 20 | -20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | 80 | -80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 80 | -80 | 80 | -80 | 0 | 0 | 20 | -20 | 80 | -80 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 144 | -144 | 144 | -144 | 0 | 0 | 36 | -36 | 144 | -144 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 144 | -144 | 144 | -144 | 0 | 0 | 36 | -36 | -144 | 144 | 36 | -36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 144 | -144 | 144 | -144 | 0 | 0 | 36 | -36 | 144 | -144 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 144 | -144 | 144 | -144 | 0 | 0 | 36 | -36 | -144 | 144 | 36 | -36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 160 | -160 | 160 | -160 | 0 | 0 | 40 | -40 | -160 | 160 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | 160 | -160 | 160 | -160 | 0 | 0 | 40 | -40 | -160 | 160 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 160 | -160 | 160 | -160 | 0 | 0 | 40 | -40 | 160 | -160 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 160 | -160 | 160 | -160 | 0 | 0 | 40 | -40 | 160 | -160 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 256 | -256 | 256 | -256 | 0 | 0 | 64 | -64 | 256 | -256 | -64 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 256 | -256 | 256 | -256 | 0 | 0 | 64 | -64 | -256 | 256 | 64 | -64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 20 | 20 | -20 | -20 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{138}$ | 20 | 20 | -20 | -20 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{139}$ | 20 | 20 | -20 | -20 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{140}$ | 20 | 20 | -20 | -20 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{141}$ | 40 | 40 | -40 | -40 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 8 | -8 | 0 | 0 |
| $\chi_{142}$ | 80 | 80 | -80 | -80 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | -48 | 16 | -16 | 0 | 0 |
| $\chi_{143}$ | 80 | 80 | -80 | -80 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | -48 | 16 | -16 | 0 | 0 |
| $\chi_{144}$ | 80 | 80 | -80 | -80 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | -48 | 16 | -16 | 0 | 0 |
| $\chi_{145}$ | 80 | 80 | -80 | -80 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | -48 | 16 | -16 | 0 | 0 |
| $\chi_{146}$ | 120 | 120 | -120 | -120 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -8 | 8 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2C$ | | | | | | $2D$ | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2O$ | $2P$ | $4E$ | $4F$ | $2Q$ | $4G$ | $2R$ | $2S$ | $4H$ | $4I$ | $2T$ | $4J$ | $4K$ |
| $\chi_{75}$ | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 32 | -32 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 32 | -32 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 40 | -40 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 40 | -40 | -20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 48 | -48 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | -16 | 16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | -16 | 16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -16 | 16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | -16 | 16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 16 | -16 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 24 | -24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 24 | -24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | -32 | 32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | -32 | 32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -8 | 8 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 8 | -8 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 8 | -8 | 0 | 0 | 0 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -8 | 8 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -4 | 4 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 4 | -4 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 12 | -12 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -12 | 12 | 0 | 0 | 0 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 8 | -8 | 0 | 0 | 0 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | -8 | 8 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | -8 | 8 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 8 | -8 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 8 | -8 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 8 | -8 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 8 | -8 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 8 | -8 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2E$ | | | | | | | | | | $2F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2U$ | $2V$ | $2W$ | $2X$ | $4L$ | $4M$ | $4N$ | $4O$ | $2Y$ | $2Z$ | $2AA$ | $2AB$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $4P$ | $4Q$ |
| $\chi_{75}$ | 8 | -8 | 8 | -8 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | -8 | 8 | -8 | 8 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 16 | -16 | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | -16 | 16 | -16 | 16 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 24 | -24 | 24 | -24 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | -24 | 24 | -24 | 24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | -8 | 8 | -8 | 8 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 8 | -8 | 8 | -8 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | -16 | 16 | -16 | 16 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 16 | -16 | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 32 | -32 | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | -32 | 32 | -32 | 32 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | -24 | 24 | -24 | 24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 24 | -24 | 24 | -24 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | -16 | 16 | -16 | 16 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 16 | -16 | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 8 | -8 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{94}$ | 8 | -8 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{95}$ | -8 | 8 | 8 | -8 | 0 | 0 | 4 | -4 | 0 | 0 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{96}$ | -8 | 8 | 8 | -8 | 0 | 0 | 4 | -4 | 0 | 0 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{97}$ | -24 | 24 | 24 | -24 | 0 | 0 | 12 | -12 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{98}$ | -24 | 24 | 24 | -24 | 0 | 0 | 12 | -12 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{99}$ | 24 | -24 | -24 | 24 | 0 | 0 | -12 | 12 | 0 | 0 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{100}$ | 24 | -24 | -24 | 24 | 0 | 0 | -12 | 12 | 0 | 0 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{101}$ | -8 | 8 | 8 | -8 | 0 | 0 | 4 | -4 | 0 | 0 | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 |
| $\chi_{102}$ | 8 | -8 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 |
| $\chi_{103}$ | -8 | 8 | 8 | -8 | 0 | 0 | 4 | -4 | 0 | 0 | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 |
| $\chi_{104}$ | 8 | -8 | -8 | 8 | 0 | 0 | -4 | 4 | 0 | 0 | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 |
| $\chi_{105}$ | -24 | 24 | 24 | -24 | 0 | 0 | 12 | -12 | 0 | 0 | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 |
| $\chi_{106}$ | -24 | 24 | 24 | -24 | 0 | 0 | 12 | -12 | 0 | 0 | -12 | 12 | -12 | 12 | -12 | 12 | 0 | 0 |
| $\chi_{107}$ | 24 | -24 | -24 | 24 | 0 | 0 | -12 | 12 | 0 | 0 | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 |
| $\chi_{108}$ | 24 | -24 | -24 | 24 | 0 | 0 | -12 | 12 | 0 | 0 | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 |
| $\chi_{109}$ | -16 | 16 | 16 | -16 | 0 | 0 | 8 | -8 | 0 | 0 | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{110}$ | 16 | -16 | -16 | 16 | 0 | 0 | -8 | 8 | 0 | 0 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{111}$ | -16 | 16 | 16 | -16 | 0 | 0 | 8 | -8 | 0 | 0 | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{112}$ | 16 | -16 | -16 | 16 | 0 | 0 | -8 | 8 | 0 | 0 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 8 | -8 | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{116}$ | 8 | -8 | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{117}$ | -8 | 8 | -8 | 8 | 4 | -4 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{118}$ | -8 | 8 | -8 | 8 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{119}$ | -24 | 24 | -24 | 24 | 12 | -12 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{120}$ | -24 | 24 | -24 | 24 | 12 | -12 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{121}$ | 24 | -24 | 24 | -24 | -12 | 12 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{122}$ | 24 | -24 | 24 | -24 | -12 | 12 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{123}$ | -8 | 8 | -8 | 8 | 4 | -4 | 0 | 0 | 0 | 0 | -12 | 12 | -12 | 12 | 12 | -12 | 0 | 0 |
| $\chi_{124}$ | 8 | -8 | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | 12 | -12 | 12 | -12 | -12 | 12 | 0 | 0 |
| $\chi_{125}$ | -8 | 8 | -8 | 8 | 4 | -4 | 0 | 0 | 0 | 0 | 12 | -12 | 12 | -12 | -12 | 12 | 0 | 0 |
| $\chi_{126}$ | 8 | -8 | 8 | -8 | -4 | 4 | 0 | 0 | 0 | 0 | -12 | 12 | -12 | 12 | 12 | -12 | 0 | 0 |
| $\chi_{127}$ | -24 | 24 | -24 | 24 | 12 | -12 | 0 | 0 | 0 | 0 | -12 | 12 | -12 | 12 | 12 | -12 | 0 | 0 |
| $\chi_{128}$ | -24 | 24 | -24 | 24 | 12 | -12 | 0 | 0 | 0 | 0 | 12 | -12 | 12 | -12 | -12 | 12 | 0 | 0 |
| $\chi_{129}$ | 24 | -24 | 24 | -24 | -12 | 12 | 0 | 0 | 0 | 0 | 12 | -12 | 12 | -12 | -12 | 12 | 0 | 0 |
| $\chi_{130}$ | 24 | -24 | 24 | -24 | -12 | 12 | 0 | 0 | 0 | 0 | -12 | 12 | -12 | 12 | 12 | -12 | 0 | 0 |
| $\chi_{131}$ | -16 | 16 | -16 | 16 | 8 | -8 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 |
| $\chi_{132}$ | 16 | -16 | 16 | -16 | -8 | 8 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | -8 | 8 | 0 | 0 |
| $\chi_{133}$ | -16 | 16 | -16 | 16 | 8 | -8 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | -8 | 8 | 0 | 0 |
| $\chi_{134}$ | 16 | -16 | 16 | -16 | -8 | 8 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 8 | -8 | -8 | 8 | 0 | 0 | 4 | -4 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 8 | -8 | -8 | 8 | 0 | 0 | 4 | -4 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | -8 | 8 | 8 | -8 | 0 | 0 | -4 | 4 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | -8 | 8 | 8 | -8 | 0 | 0 | -4 | 4 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | -16 | 16 | 16 | -16 | 0 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 16 | -16 | -16 | 16 | 0 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | -32 | 32 | 32 | -32 | 0 | 0 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2G$ | | | | | | $2H$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AG$ | $4R$ | $4S$ | $2AH$ | $4T$ | $4U$ | $2AI$ | $4V$ | $4W$ | $2AJ$ | $4X$ | $4Y$ | $4Z$ | $4AA$ |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -12 | 12 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 12 | -12 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 12 | -12 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | -12 | 12 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | -12 | 12 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 12 | -12 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 12 | -12 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -12 | 12 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 12 | 12 | -12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | -12 | -12 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 12 | 12 | -12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | -12 | -12 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | -12 | -12 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | -12 | -12 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 12 | 12 | -12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 12 | 12 | -12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2I$ | | | | | | | | $2J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AK$ | $2AL$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $4AG$ | $2AM$ | $2AN$ | $2AO$ | $2AP$ | $4AH$ | $4AI$ | $4AJ$ | $4AK$ |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{94}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{95}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{96}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{97}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{98}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{99}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{100}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{101}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{102}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{103}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{104}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{105}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{106}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{107}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{108}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 4 | -4 |
| $\chi_{109}$ | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | -8 | 8 |
| $\chi_{110}$ | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | -8 | 8 |
| $\chi_{111}$ | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | -8 | 8 |
| $\chi_{112}$ | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | -8 | 8 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{116}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{117}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{118}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{119}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{120}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{121}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{122}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{123}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{124}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{125}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{126}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{127}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{128}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{129}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{130}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{131}$ | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 |
| $\chi_{132}$ | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 |
| $\chi_{133}$ | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 |
| $\chi_{134}$ | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 8 | -8 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | -8 | 8 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2J$ | | | $3A$ | | | | | | | | $3B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AQ$ | $4AL$ | $4AM$ | $3A$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ | $6G$ | $3B$ | $6H$ | $6I$ | $6J$ | $6K$ | $6L$ |
| $\chi_{75}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 12 | 12 | -12 | -12 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 12 | 12 | -12 | -12 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | -6 | -6 | 6 | 6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | -6 | -6 | 6 | 6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | -12 | -12 | 12 | 12 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | -6 | -6 | 6 | 6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | -6 | -6 | 6 | 6 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{94}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{95}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{96}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{97}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | -4 | 4 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{98}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | -4 | 4 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{99}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | -4 | 4 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{100}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | -4 | 4 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{101}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{102}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{103}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{104}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{110}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{111}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{112}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | -2 | 2 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{113}$ | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 4 | -4 | -2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{114}$ | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 4 | -4 | -2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{115}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{116}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{117}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{118}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{119}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 4 | -4 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{120}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 4 | -4 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{121}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 4 | -4 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{122}$ | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 4 | -4 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{123}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{124}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{125}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{126}$ | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{132}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{133}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{134}$ | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 2 | -2 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{135}$ | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | -4 | 4 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{136}$ | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | -4 | 4 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{137}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 4 | 4 | -4 | -4 | -4 | 4 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $4A$ | | | | | $4B$ | | | | | $4C$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AN$ | $4AO$ | $4AP$ | $4AQ$ | $8A$ | $4AR$ | $4AS$ | $4AT$ | $4AU$ | $8B$ | $4AV$ | $4AW$ | $4AX$ | $4AY$ |
| $\chi_{75}$ | 2 | -2 | -2 | 2 | 0 | 6 | -6 | 2 | -2 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{76}$ | -2 | 2 | 2 | -2 | 0 | -6 | 6 | -2 | 2 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{77}$ | 4 | -4 | -4 | 4 | 0 | 12 | -12 | 4 | -4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | -4 | 4 | 4 | -4 | 0 | -12 | 12 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | -6 | 6 | 6 | -6 | 0 | 6 | -6 | 2 | -2 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{80}$ | 6 | -6 | -6 | 6 | 0 | -6 | 6 | -2 | 2 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{81}$ | -2 | 2 | 2 | -2 | 0 | -6 | 6 | -2 | 2 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{82}$ | 2 | -2 | -2 | 2 | 0 | 6 | -6 | 2 | -2 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 0 | 0 |
| $\chi_{84}$ | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{85}$ | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{86}$ | 4 | -4 | -4 | 4 | 0 | -12 | 12 | -4 | 4 | 0 | -8 | 8 | 0 | 0 |
| $\chi_{87}$ | -4 | 4 | 4 | -4 | 0 | 12 | -12 | 4 | -4 | 0 | -8 | 8 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{89}$ | 6 | -6 | -6 | 6 | 0 | -6 | 6 | -2 | 2 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{90}$ | -6 | 6 | 6 | -6 | 0 | 6 | -6 | 2 | -2 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{91}$ | 4 | -4 | -4 | 4 | 0 | 12 | -12 | 4 | -4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | -4 | 4 | 4 | -4 | 0 | -12 | 12 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 6 | -6 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 6 | -6 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | -6 | 6 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | -6 | 6 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | -12 | 12 | -4 | 4 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 12 | -12 | 4 | -4 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 12 | -12 | 4 | -4 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4D | | | | 4E | | | | | 4F | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AZ$ | $4BA$ | $4BB$ | $4BC$ | $4BD$ | $4BE$ | $4BF$ | $4BG$ | $4BH$ | $4BI$ | $4BJ$ | $4BK$ | $4BL$ | $4BM$ | $4BN$ | $8C$ | $8D$ |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 4 | -4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 4 | -4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4G | | | | | | 4H | | | | | | 4I | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4BO$ | $4BP$ | $4BQ$ | $4BR$ | $8E$ | $8F$ | $4BS$ | $4BT$ | $4BU$ | $4BV$ | $8G$ | $8H$ | $4BW$ | $4BX$ | $4BY$ | $4BZ$ | $4CA$ |
| $\chi_{75}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 |
| $\chi_{138}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 |
| $\chi_{139}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 |
| $\chi_{140}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 |
| $\chi_{141}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4I | | | 4J | | | | | | 5A | | | | | | 6A | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4CB | 8I | 8J | 4CC | 4CD | 4CE | 4CF | 8K | 8L | 5A | 10A | 10B | 10C | 10D | 10E | 6M | 6N |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | 4 | -4 |
| $\chi_{94}$ | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | -4 | 4 |
| $\chi_{95}$ | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | 4 | -4 |
| $\chi_{96}$ | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | -4 | 4 |
| $\chi_{97}$ | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 |
| $\chi_{98}$ | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 |
| $\chi_{99}$ | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 |
| $\chi_{100}$ | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 |
| $\chi_{101}$ | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{102}$ | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{103}$ | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{104}$ | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{105}$ | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{106}$ | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{107}$ | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{108}$ | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | -8 | 8 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | 8 | -8 |
| $\chi_{115}$ | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | 4 | -4 |
| $\chi_{116}$ | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | -4 | 4 |
| $\chi_{117}$ | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | 4 | -4 |
| $\chi_{118}$ | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | -4 | 4 |
| $\chi_{119}$ | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 |
| $\chi_{120}$ | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 |
| $\chi_{121}$ | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 |
| $\chi_{122}$ | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 |
| $\chi_{123}$ | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{124}$ | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{125}$ | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{126}$ | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{127}$ | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{128}$ | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{129}$ | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{130}$ | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | -8 | 8 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | 8 | -8 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6A$ | | | $6B$ | | | | $6C$ | | | | | $6D$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $12A$ | $12B$ | $6O$ | $6P$ | $6Q$ | $12C$ | $12D$ | $6R$ | $12E$ | $12F$ | $6S$ | $12G$ | $6T$ | $6U$ | $12H$ | $12I$ |
| $\chi_{75}$ | 0 | 0 | 0 | 4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 4 | -4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | -4 | 4 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | -4 | 4 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | -4 | 4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | -4 | 4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | -4 | 4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | -4 | 4 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 4 | -4 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 4 | -4 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{94}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{95}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{96}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{97}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{98}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{99}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{100}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{101}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{102}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{103}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{104}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{110}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{111}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{112}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{113}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{114}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{115}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{116}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{117}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{118}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{119}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{120}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{121}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{122}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{123}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{124}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{125}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{126}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{132}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{133}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{134}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{135}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{136}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | | $6F$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6V$ | $6W$ | $6X$ | $6Y$ | $12J$ | $12K$ | $12L$ | $12M$ | $6Z$ | $6AA$ | $6AB$ | $12N$ | $12O$ | $12P$ | $12Q$ |
| $\chi_{75}$ | 2 | 2 | -2 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | -2 | -2 | 2 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | -2 | -2 | 2 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 2 | 2 | -2 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | -2 | -2 | 2 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 2 | 2 | -2 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 2 | 2 | -2 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | -2 | -2 | 2 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 2 | 2 | -2 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | -2 | -2 | 2 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 2 | 2 | -2 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | -2 | -2 | 2 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 2 | -2 | 2 | -2 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{94}$ | 2 | -2 | 2 | -2 | -2 | 0 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{95}$ | -2 | 2 | -2 | 2 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{96}$ | -2 | 2 | -2 | 2 | 2 | 0 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -2 | 2 | -2 | 2 | 2 | 0 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{102}$ | 2 | -2 | 2 | -2 | -2 | 0 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{103}$ | -2 | 2 | -2 | 2 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{104}$ | 2 | -2 | 2 | -2 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 2 | -2 | 2 | -2 | -2 | 0 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{110}$ | -2 | 2 | -2 | 2 | 2 | 0 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{111}$ | 2 | -2 | 2 | -2 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{112}$ | -2 | 2 | -2 | 2 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 2 | 2 | -2 | -2 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{116}$ | 2 | 2 | -2 | -2 | 0 | 2 | 0 | -2 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{117}$ | -2 | -2 | 2 | 2 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{118}$ | -2 | -2 | 2 | 2 | 0 | -2 | 0 | 2 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | -2 | -2 | 2 | 2 | 0 | -2 | 0 | 2 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{124}$ | 2 | 2 | -2 | -2 | 0 | 2 | 0 | -2 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{125}$ | -2 | -2 | 2 | 2 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{126}$ | 2 | 2 | -2 | -2 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 2 | 2 | -2 | -2 | 0 | 2 | 0 | -2 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{132}$ | -2 | -2 | 2 | 2 | 0 | -2 | 0 | 2 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{133}$ | 2 | 2 | -2 | -2 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{134}$ | -2 | -2 | 2 | 2 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 2 | -2 | 2 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 2 | -2 | 2 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | -2 | 2 | -2 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | -2 | 2 | -2 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 2 | -2 | 2 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | -2 | 2 | -2 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | -2 | 2 | -2 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6G$ | | | | $6H$ | | | | | | $8A$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $6AD$ | $12R$ | $12S$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8K$ | $8L$ | $8M$ |
| $\chi_{75}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{76}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{94}$ | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{95}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{96}$ | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{97}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{98}$ | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{99}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{100}$ | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{110}$ | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{111}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{112}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{116}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{117}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{118}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{119}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{120}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{121}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{122}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{132}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{133}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 |
| $\chi_{134}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $8B$ | | | $10A$ | | | | $12A$ | | | $12B$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8N$ | $8O$ | $8P$ | $10F$ | $10G$ | $20A$ | $20B$ | $12T$ | $12U$ | $24A$ | $12V$ | $12W$ | $24B$ |
| $\chi_{75}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{76}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{79}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{80}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{81}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{82}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{93}$ | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{113}$ | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{114}$ | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{117}$ | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{118}$ | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $1A$ | | | | | | | | $2A$ | | | | | $2B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $2I$ | $4A$ | $4B$ | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ | $4C$ | $4D$ |
| $\chi_{147}$ | 120 | 120 | -120 | -120 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -8 | 8 | 0 | 0 |
| $\chi_{148}$ | 120 | 120 | -120 | -120 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -8 | 8 | 0 | 0 |
| $\chi_{149}$ | 120 | 120 | -120 | -120 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -8 | 8 | 0 | 0 |
| $\chi_{150}$ | 180 | 180 | -180 | -180 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{151}$ | 180 | 180 | -180 | -180 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{152}$ | 180 | 180 | -180 | -180 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{153}$ | 180 | 180 | -180 | -180 | -36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | -12 | 4 | -4 | 0 | 0 |
| $\chi_{154}$ | 240 | 240 | -240 | -240 | -48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -48 | 48 | -16 | 16 | 0 | 0 |
| $\chi_{155}$ | 240 | 240 | -240 | -240 | -48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -48 | 48 | -16 | 16 | 0 | 0 |
| $\chi_{156}$ | 360 | 360 | -360 | -360 | -72 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 8 | -8 | 0 | 0 |
| $\chi_{157}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | 30 | 30 | 0 | 0 | -2 | 14 | 14 | -2 | -2 | -2 | 0 |
| $\chi_{158}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | 30 | 30 | 0 | 0 | -2 | 14 | 14 | -2 | -2 | -2 | 0 |
| $\chi_{159}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | -30 | -30 | 0 | 0 | 2 | -10 | -10 | 6 | 6 | -2 | 0 |
| $\chi_{160}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | -30 | -30 | 0 | 0 | 2 | -10 | -10 | 6 | 6 | -2 | 0 |
| $\chi_{161}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | -30 | -30 | 0 | 0 | 2 | -10 | -10 | 6 | 6 | -2 | 0 |
| $\chi_{162}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | -30 | -30 | 0 | 0 | 2 | -10 | -10 | 6 | 6 | -2 | 0 |
| $\chi_{163}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | 30 | 30 | 0 | 0 | -2 | 14 | 14 | -2 | -2 | -2 | 0 |
| $\chi_{164}$ | 30 | 30 | 30 | 30 | -2 | -2 | 0 | 0 | 30 | 30 | 0 | 0 | -2 | 14 | 14 | -2 | -2 | -2 | 0 |
| $\chi_{165}$ | 60 | 60 | 60 | 60 | -4 | -4 | 0 | 0 | -60 | -60 | 0 | 0 | 4 | -20 | -20 | 12 | 12 | -4 | 0 |
| $\chi_{166}$ | 60 | 60 | 60 | 60 | -4 | -4 | 0 | 0 | 60 | 60 | 0 | 0 | -4 | 28 | 28 | -4 | -4 | -4 | 0 |
| $\chi_{167}$ | 60 | 60 | 60 | 60 | -4 | -4 | 0 | 0 | 60 | 60 | 0 | 0 | -4 | 28 | 28 | -4 | -4 | -4 | 0 |
| $\chi_{168}$ | 60 | 60 | 60 | 60 | -4 | -4 | 0 | 0 | -60 | -60 | 0 | 0 | 4 | -20 | -20 | 12 | 12 | -4 | 0 |
| $\chi_{169}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{170}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{171}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{172}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{173}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{174}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{175}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{176}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{177}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{178}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{179}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{180}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{181}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{182}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{183}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | -6 | -6 | 10 | 10 | -6 | 0 |
| $\chi_{184}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | 18 | 18 | 2 | 2 | -6 | 0 |
| $\chi_{185}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | -30 | -30 | 18 | 18 | -6 | 0 |
| $\chi_{186}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | 42 | 42 | -6 | -6 | -6 | 0 |
| $\chi_{187}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | 42 | 42 | -6 | -6 | -6 | 0 |
| $\chi_{188}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | -30 | -30 | 18 | 18 | -6 | 0 |
| $\chi_{189}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | -30 | -30 | 18 | 18 | -6 | 0 |
| $\chi_{190}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | 42 | 42 | -6 | -6 | -6 | 0 |
| $\chi_{191}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | 90 | 90 | 0 | 0 | -6 | 42 | 42 | -6 | -6 | -6 | 0 |
| $\chi_{192}$ | 90 | 90 | 90 | 90 | -6 | -6 | 0 | 0 | -90 | -90 | 0 | 0 | 6 | -30 | -30 | 18 | 18 | -6 | 0 |
| $\chi_{193}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | -120 | -120 | 0 | 0 | 8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{194}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | 120 | 120 | 0 | 0 | -8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{195}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | 120 | 120 | 0 | 0 | -8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{196}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | -120 | -120 | 0 | 0 | 8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{197}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | -120 | -120 | 0 | 0 | 8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{198}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | 120 | 120 | 0 | 0 | -8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{199}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | 120 | 120 | 0 | 0 | -8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{200}$ | 120 | 120 | 120 | 120 | -8 | -8 | 0 | 0 | -120 | -120 | 0 | 0 | 8 | -8 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{201}$ | 180 | 180 | 180 | 180 | -12 | -12 | 0 | 0 | -180 | -180 | 0 | 0 | 12 | 36 | 36 | 4 | 4 | -12 | 0 |
| $\chi_{202}$ | 180 | 180 | 180 | 180 | -12 | -12 | 0 | 0 | 180 | 180 | 0 | 0 | -12 | -12 | -12 | 20 | 20 | -12 | 0 |
| $\chi_{203}$ | 180 | 180 | 180 | 180 | -12 | -12 | 0 | 0 | 180 | 180 | 0 | 0 | -12 | -12 | -12 | 20 | 20 | -12 | 0 |
| $\chi_{204}$ | 180 | 180 | 180 | 180 | -12 | -12 | 0 | 0 | -180 | -180 | 0 | 0 | 12 | 36 | 36 | 4 | 4 | -12 | 0 |
| $\chi_{205}$ | 240 | 240 | 240 | 240 | -16 | -16 | 0 | 0 | 240 | 240 | 0 | 0 | -16 | -16 | -16 | -16 | -16 | 16 | 0 |
| $\chi_{206}$ | 240 | 240 | 240 | 240 | -16 | -16 | 0 | 0 | -240 | -240 | 0 | 0 | 16 | -16 | -16 | -16 | -16 | 16 | 0 |
| $\chi_{207}$ | 240 | 240 | 240 | 240 | -16 | -16 | 0 | 0 | -240 | -240 | 0 | 0 | 16 | -16 | -16 | -16 | -16 | 16 | 0 |
| $\chi_{208}$ | 240 | 240 | 240 | 240 | -16 | -16 | 0 | 0 | 240 | 240 | 0 | 0 | -16 | -16 | -16 | -16 | -16 | 16 | 0 |
| $\chi_{209}$ | 32 | -32 | -32 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 32 | -32 | -32 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 160 | -160 | -160 | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 160 | -160 | -160 | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 160 | -160 | -160 | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 160 | -160 | -160 | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 288 | -288 | -288 | 288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 288 | -288 | -288 | 288 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 320 | -320 | -320 | 320 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 320 | -320 | -320 | 320 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 512 | -512 | -512 | 512 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2C$ | | | | | | $2D$ | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2O$ | $2P$ | $4E$ | $4F$ | $2Q$ | $4G$ | $2R$ | $2S$ | $4H$ | $4I$ | $2T$ | $4J$ | $4K$ |
| $\chi_{147}$ | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 16 | -16 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | -24 | 24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | -24 | 24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | -24 | 24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | -24 | 24 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 32 | -32 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | -48 | 48 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 14 | 14 | -2 | -2 | -2 | 0 | 14 | 14 | 0 | 0 | -2 | 0 | -2 |
| $\chi_{158}$ | 14 | 14 | -2 | -2 | -2 | 0 | -10 | -10 | 0 | 0 | 6 | 0 | -2 |
| $\chi_{159}$ | 10 | 10 | 2 | 2 | -6 | 0 | -12 | -12 | -2 | -2 | 4 | 2 | 0 |
| $\chi_{160}$ | 10 | 10 | 2 | 2 | -6 | 0 | 12 | 12 | -2 | -2 | -4 | 2 | 0 |
| $\chi_{161}$ | 10 | 10 | 2 | 2 | -6 | 0 | -12 | -12 | 2 | 2 | 4 | -2 | 0 |
| $\chi_{162}$ | 10 | 10 | 2 | 2 | -6 | 0 | 12 | 12 | 2 | 2 | -4 | -2 | 0 |
| $\chi_{163}$ | 14 | 14 | -2 | -2 | -2 | 0 | 10 | 10 | 0 | 0 | -6 | 0 | 2 |
| $\chi_{164}$ | 14 | 14 | -2 | -2 | -2 | 0 | -14 | -14 | 0 | 0 | 2 | 0 | 2 |
| $\chi_{165}$ | 20 | 20 | 4 | 4 | -12 | 0 | 0 | 0 | -4 | -4 | 0 | 4 | 0 |
| $\chi_{166}$ | 28 | 28 | -4 | -4 | -4 | 0 | -4 | -4 | 0 | 0 | -4 | 0 | 4 |
| $\chi_{167}$ | 28 | 28 | -4 | -4 | -4 | 0 | 4 | 4 | 0 | 0 | 4 | 0 | -4 |
| $\chi_{168}$ | 20 | 20 | 4 | 4 | -12 | 0 | 0 | 0 | 4 | 4 | 0 | -4 | 0 |
| $\chi_{169}$ | -6 | -6 | -6 | -6 | 10 | 0 | -18 | -18 | 0 | 0 | -2 | 0 | 6 |
| $\chi_{170}$ | -18 | -18 | 6 | 6 | -2 | 0 | 12 | 12 | -6 | -6 | -4 | 6 | 0 |
| $\chi_{171}$ | -18 | -18 | 6 | 6 | -2 | 0 | 12 | 12 | 6 | 6 | -4 | -6 | 0 |
| $\chi_{172}$ | -6 | -6 | -6 | -6 | 10 | 0 | -6 | -6 | 0 | 0 | 10 | 0 | -6 |
| $\chi_{173}$ | -6 | -6 | -6 | -6 | 10 | 0 | 6 | 6 | 0 | 0 | -10 | 0 | 6 |
| $\chi_{174}$ | -18 | -18 | 6 | 6 | -2 | 0 | -12 | -12 | -6 | -6 | 4 | 6 | 0 |
| $\chi_{175}$ | -18 | -18 | 6 | 6 | -2 | 0 | -12 | -12 | 6 | 6 | 4 | -6 | 0 |
| $\chi_{176}$ | -6 | -6 | -6 | -6 | 10 | 0 | 18 | 18 | 0 | 0 | 2 | 0 | -6 |
| $\chi_{177}$ | -18 | -18 | 6 | 6 | -2 | 0 | 12 | 12 | 6 | 6 | -4 | -6 | 0 |
| $\chi_{178}$ | -6 | -6 | -6 | -6 | 10 | 0 | -6 | -6 | 0 | 0 | 10 | 0 | -6 |
| $\chi_{179}$ | -6 | -6 | -6 | -6 | 10 | 0 | -18 | -18 | 0 | 0 | -2 | 0 | 6 |
| $\chi_{180}$ | -18 | -18 | 6 | 6 | -2 | 0 | 12 | 12 | -6 | -6 | -4 | 6 | 0 |
| $\chi_{181}$ | -18 | -18 | 6 | 6 | -2 | 0 | -12 | -12 | 6 | 6 | 4 | -6 | 0 |
| $\chi_{182}$ | -6 | -6 | -6 | -6 | 10 | 0 | 18 | 18 | 0 | 0 | 2 | 0 | -6 |
| $\chi_{183}$ | -6 | -6 | -6 | -6 | 10 | 0 | 6 | 6 | 0 | 0 | -10 | 0 | 6 |
| $\chi_{184}$ | -18 | -18 | 6 | 6 | -2 | 0 | -12 | -12 | -6 | -6 | 4 | 6 | 0 |
| $\chi_{185}$ | 30 | 30 | 6 | 6 | -18 | 0 | 12 | 12 | 6 | 6 | -4 | -6 | 0 |
| $\chi_{186}$ | 42 | 42 | -6 | -6 | -6 | 0 | -6 | -6 | 0 | 0 | 10 | 0 | -6 |
| $\chi_{187}$ | 42 | 42 | -6 | -6 | -6 | 0 | -18 | -18 | 0 | 0 | -2 | 0 | 6 |
| $\chi_{188}$ | 30 | 30 | 6 | 6 | -18 | 0 | 12 | 12 | -6 | -6 | -4 | 6 | 0 |
| $\chi_{189}$ | 30 | 30 | 6 | 6 | -18 | 0 | -12 | -12 | 6 | 6 | 4 | -6 | 0 |
| $\chi_{190}$ | 42 | 42 | -6 | -6 | -6 | 0 | 18 | 18 | 0 | 0 | 2 | 0 | -6 |
| $\chi_{191}$ | 42 | 42 | -6 | -6 | -6 | 0 | 6 | 6 | 0 | 0 | -10 | 0 | 6 |
| $\chi_{192}$ | 30 | 30 | 6 | 6 | -18 | 0 | -12 | -12 | -6 | -6 | 4 | 6 | 0 |
| $\chi_{193}$ | 8 | 8 | -8 | -8 | 8 | 0 | 32 | 32 | 0 | 0 | 0 | 0 | -8 |
| $\chi_{194}$ | -8 | -8 | 8 | 8 | -8 | 0 | -24 | -24 | 8 | 8 | 8 | -8 | 0 |
| $\chi_{195}$ | -8 | -8 | 8 | 8 | -8 | 0 | -24 | -24 | -8 | -8 | 8 | 8 | 0 |
| $\chi_{196}$ | 8 | 8 | -8 | -8 | 8 | 0 | 16 | 16 | 0 | 0 | -16 | 0 | 8 |
| $\chi_{197}$ | 8 | 8 | -8 | -8 | 8 | 0 | -16 | -16 | 0 | 0 | 16 | 0 | -8 |
| $\chi_{198}$ | -8 | -8 | 8 | 8 | -8 | 0 | 24 | 24 | 8 | 8 | -8 | -8 | 0 |
| $\chi_{199}$ | -8 | -8 | 8 | 8 | -8 | 0 | 24 | 24 | -8 | -8 | -8 | 8 | 0 |
| $\chi_{200}$ | 8 | 8 | -8 | -8 | 8 | 0 | -32 | -32 | 0 | 0 | 0 | 0 | 8 |
| $\chi_{201}$ | -36 | -36 | 12 | 12 | -4 | 0 | 0 | 0 | 12 | 12 | 0 | -12 | 0 |
| $\chi_{202}$ | -12 | -12 | -12 | -12 | 20 | 0 | 12 | 12 | 0 | 0 | 12 | 0 | -12 |
| $\chi_{203}$ | -12 | -12 | -12 | -12 | 20 | 0 | -12 | -12 | 0 | 0 | -12 | 0 | 12 |
| $\chi_{204}$ | -36 | -36 | 12 | 12 | -4 | 0 | 0 | 0 | -12 | -12 | 0 | 12 | 0 |
| $\chi_{205}$ | -16 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | 16 | 16 | 0 | -16 | 0 |
| $\chi_{206}$ | 16 | 16 | -16 | -16 | 16 | 0 | 16 | 16 | 0 | 0 | 16 | 0 | -16 |
| $\chi_{207}$ | 16 | 16 | -16 | -16 | 16 | 0 | -16 | -16 | 0 | 0 | -16 | 0 | 16 |
| $\chi_{208}$ | -16 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | -16 | -16 | 0 | 16 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2E$ | | | | | | | | | | $2F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2U$ | $2V$ | $2W$ | $2X$ | $4L$ | $4M$ | $4N$ | $4O$ | $2Y$ | $2Z$ | $2AA$ | $2AB$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $4P$ | $4Q$ |
| $\chi_{147}$ | 32 | -32 | -32 | 32 | 0 | 0 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 16 | -16 | -16 | 16 | 0 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | -16 | 16 | 16 | -16 | 0 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | -24 | 24 | 24 | -24 | 0 | 0 | -12 | 12 | 0 | 0 | -24 | 24 | 24 | -24 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 24 | -24 | -24 | 24 | 0 | 0 | 12 | -12 | 0 | 0 | -24 | 24 | 24 | -24 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | -24 | 24 | 24 | -24 | 0 | 0 | -12 | 12 | 0 | 0 | 24 | -24 | -24 | 24 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 24 | -24 | -24 | 24 | 0 | 0 | 12 | -12 | 0 | 0 | 24 | -24 | -24 | 24 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 16 | -16 | -16 | 16 | 0 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | -16 | 16 | 16 | -16 | 0 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 14 | 14 | 14 | 14 | 0 | 0 | -2 | -2 | -2 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | -2 | 0 |
| $\chi_{158}$ | -10 | -10 | -10 | -10 | 0 | 0 | -2 | -2 | 6 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | -2 | 0 |
| $\chi_{159}$ | 12 | 12 | 12 | 12 | 2 | 2 | 0 | 0 | -4 | -2 | 0 | 0 | 0 | 0 | -6 | -6 | 0 | 2 |
| $\chi_{160}$ | -12 | -12 | -12 | -12 | 2 | 2 | 0 | 0 | 4 | -2 | 0 | 0 | 0 | 0 | -6 | -6 | 0 | 2 |
| $\chi_{161}$ | 12 | 12 | 12 | 12 | -2 | -2 | 0 | 0 | -4 | 2 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | -2 |
| $\chi_{162}$ | -12 | -12 | -12 | -12 | -2 | -2 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | -2 |
| $\chi_{163}$ | 10 | 10 | 10 | 10 | 0 | 0 | 2 | 2 | -6 | 0 | -6 | -6 | -6 | -6 | 0 | 0 | 2 | 0 |
| $\chi_{164}$ | -14 | -14 | -14 | -14 | 0 | 0 | 2 | 2 | 2 | 0 | -6 | -6 | -6 | -6 | 0 | 0 | 2 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | 0 | 0 | 0 | 0 | -12 | -12 | 0 | 4 |
| $\chi_{166}$ | -4 | -4 | -4 | -4 | 0 | 0 | 4 | 4 | -4 | 0 | -12 | -12 | -12 | -12 | 0 | 0 | 4 | 0 |
| $\chi_{167}$ | 4 | 4 | 4 | 4 | 0 | 0 | -4 | -4 | 4 | 0 | 12 | 12 | 12 | 12 | 0 | 0 | -4 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 12 | 12 | 0 | -4 |
| $\chi_{169}$ | -18 | -18 | -18 | -18 | 0 | 0 | 6 | 6 | -2 | 0 | -6 | -6 | -6 | -6 | -12 | -12 | 2 | 4 |
| $\chi_{170}$ | -12 | -12 | -12 | -12 | 6 | 6 | 0 | 0 | 4 | -6 | -12 | -12 | -12 | -12 | -6 | -6 | 4 | 2 |
| $\chi_{171}$ | -12 | -12 | -12 | -12 | -6 | -6 | 0 | 0 | 4 | 6 | 12 | 12 | 12 | 12 | 6 | 6 | -4 | -2 |
| $\chi_{172}$ | -6 | -6 | -6 | -6 | 0 | 0 | -6 | -6 | 10 | 0 | 6 | 6 | 6 | 6 | 12 | 12 | -2 | -4 |
| $\chi_{173}$ | 6 | 6 | 6 | 6 | 0 | 0 | 6 | 6 | -10 | 0 | -6 | -6 | -6 | -6 | -12 | -12 | 2 | 4 |
| $\chi_{174}$ | 12 | 12 | 12 | 12 | 6 | 6 | 0 | 0 | -4 | -6 | -12 | -12 | -12 | -12 | -6 | -6 | 4 | 2 |
| $\chi_{175}$ | 12 | 12 | 12 | 12 | -6 | -6 | 0 | 0 | -4 | 6 | 12 | 12 | 12 | 12 | 6 | 6 | -4 | -2 |
| $\chi_{176}$ | 18 | 18 | 18 | 18 | 0 | 0 | -6 | -6 | 2 | 0 | 6 | 6 | 6 | 6 | 12 | 12 | -2 | -4 |
| $\chi_{177}$ | -12 | -12 | -12 | -12 | -6 | -6 | 0 | 0 | 4 | 6 | -12 | -12 | -12 | -12 | 6 | 6 | 4 | -2 |
| $\chi_{178}$ | -6 | -6 | -6 | -6 | 0 | 0 | -6 | -6 | 10 | 0 | 6 | 6 | 6 | 6 | -12 | -12 | -2 | 4 |
| $\chi_{179}$ | -18 | -18 | -18 | -18 | 0 | 0 | 6 | 6 | -2 | 0 | -6 | -6 | -6 | -6 | 12 | 12 | 2 | -4 |
| $\chi_{180}$ | -12 | -12 | -12 | -12 | 6 | 6 | 0 | 0 | 4 | -6 | 12 | 12 | 12 | 12 | -6 | -6 | -4 | 2 |
| $\chi_{181}$ | 12 | 12 | 12 | 12 | -6 | -6 | 0 | 0 | -4 | 6 | -12 | -12 | -12 | -12 | 6 | 6 | 4 | -2 |
| $\chi_{182}$ | 18 | 18 | 18 | 18 | 0 | 0 | -6 | -6 | 2 | 0 | 6 | 6 | 6 | 6 | -12 | -12 | -2 | 4 |
| $\chi_{183}$ | 6 | 6 | 6 | 6 | 0 | 0 | 6 | 6 | -10 | 0 | -6 | -6 | -6 | -6 | 12 | 12 | 2 | -4 |
| $\chi_{184}$ | 12 | 12 | 12 | 12 | 6 | 6 | 0 | 0 | -4 | -6 | 12 | 12 | 12 | 12 | -6 | -6 | -4 | 2 |
| $\chi_{185}$ | -12 | -12 | -12 | -12 | -6 | -6 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | -6 | -6 | 0 | 2 |
| $\chi_{186}$ | -6 | -6 | -6 | -6 | 0 | 0 | -6 | -6 | 10 | 0 | -6 | -6 | -6 | -6 | 0 | 0 | 2 | 0 |
| $\chi_{187}$ | -18 | -18 | -18 | -18 | 0 | 0 | 6 | 6 | -2 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | -2 | 0 |
| $\chi_{188}$ | -12 | -12 | -12 | -12 | 6 | 6 | 0 | 0 | 4 | -6 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | -2 |
| $\chi_{189}$ | 12 | 12 | 12 | 12 | -6 | -6 | 0 | 0 | -4 | 6 | 0 | 0 | 0 | 0 | -6 | -6 | 0 | 2 |
| $\chi_{190}$ | 18 | 18 | 18 | 18 | 0 | 0 | -6 | -6 | 2 | 0 | -6 | -6 | -6 | -6 | 0 | 0 | 2 | 0 |
| $\chi_{191}$ | 6 | 6 | 6 | 6 | 0 | 0 | 6 | 6 | -10 | 0 | 6 | 6 | 6 | 6 | 0 | 0 | -2 | 0 |
| $\chi_{192}$ | 12 | 12 | 12 | 12 | 6 | 6 | 0 | 0 | -4 | -6 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | -2 |
| $\chi_{193}$ | -32 | -32 | -32 | -32 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | -24 | -24 | -24 | -24 | 8 | 8 | 0 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | -24 | -24 | -24 | -24 | -8 | -8 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | -16 | -16 | -16 | -16 | 0 | 0 | -8 | -8 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 16 | 16 | 16 | 16 | 0 | 0 | 8 | 8 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 24 | 24 | 24 | 24 | 8 | 8 | 0 | 0 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 24 | 24 | 24 | 24 | -8 | -8 | 0 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 32 | 32 | 32 | 32 | 0 | 0 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | -12 | -12 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | -12 | -12 | 0 | 4 |
| $\chi_{202}$ | 12 | 12 | 12 | 12 | 0 | 0 | -12 | -12 | 12 | 0 | -12 | -12 | -12 | -12 | 0 | 0 | 4 | 0 |
| $\chi_{203}$ | -12 | -12 | -12 | -12 | 0 | 0 | 12 | 12 | -12 | 0 | 12 | 12 | 12 | 12 | 0 | 0 | -4 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | -12 | 0 | 0 | 0 | 0 | 12 | 12 | 0 | -4 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | -16 | -16 | -16 | -16 | 0 | 0 | 16 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 16 | 16 | 16 | 16 | 0 | 0 | -16 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | -16 | -16 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 16 | 16 | -16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | -16 | -16 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | -48 | -48 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 48 | 48 | -48 | -48 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | -16 | -16 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | -24 | -24 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 16 | 16 | -16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | -24 | 24 | 24 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | -48 | -48 | 48 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | -24 | -24 | 24 | 24 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 48 | 48 | -48 | -48 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | -24 | -24 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | -32 | -32 | 32 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | -16 | -16 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 32 | 32 | -32 | -32 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | -16 | 16 | 16 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2G$ | | | | | | $2H$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AG$ | $4R$ | $4S$ | $2AH$ | $4T$ | $4U$ | $2AI$ | $4V$ | $4W$ | $2AJ$ | $4X$ | $4Y$ | $4Z$ | $4AA$ |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 6 | 0 | 0 | 6 | -2 | 0 | 6 | -2 | -2 | 6 | -2 | -2 | 0 | 0 |
| $\chi_{158}$ | 6 | 0 | 0 | 6 | -2 | 0 | -2 | -2 | -2 | -2 | 6 | -2 | 0 | 0 |
| $\chi_{159}$ | 0 | 6 | 6 | 0 | 0 | -2 | 0 | -4 | -4 | 0 | 0 | 4 | -2 | 2 |
| $\chi_{160}$ | 0 | 6 | 6 | 0 | 0 | -2 | 0 | 4 | 4 | 0 | 0 | -4 | -2 | 2 |
| $\chi_{161}$ | 0 | -6 | -6 | 0 | 0 | 2 | 0 | -4 | -4 | 0 | 0 | 4 | 2 | -2 |
| $\chi_{162}$ | 0 | -6 | -6 | 0 | 0 | 2 | 0 | 4 | 4 | 0 | 0 | -4 | 2 | -2 |
| $\chi_{163}$ | -6 | 0 | 0 | -6 | 2 | 0 | 2 | 2 | 2 | 2 | -6 | 2 | 0 | 0 |
| $\chi_{164}$ | -6 | 0 | 0 | -6 | 2 | 0 | -6 | 2 | 2 | -6 | 2 | 2 | 0 | 0 |
| $\chi_{165}$ | 0 | 12 | 12 | 0 | 0 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{166}$ | -12 | 0 | 0 | -12 | 4 | 0 | -4 | 4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{167}$ | 12 | 0 | 0 | 12 | -4 | 0 | 4 | -4 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{168}$ | 0 | -12 | -12 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{169}$ | -6 | -12 | -12 | -6 | 2 | 4 | -2 | -2 | -2 | -2 | 6 | -2 | 0 | 0 |
| $\chi_{170}$ | 12 | 6 | 6 | 12 | -4 | -2 | 0 | 4 | 4 | 0 | 0 | -4 | 2 | -2 |
| $\chi_{171}$ | -12 | -6 | -6 | -12 | 4 | 2 | 0 | 4 | 4 | 0 | 0 | -4 | -2 | 2 |
| $\chi_{172}$ | 6 | 12 | 12 | 6 | -2 | -4 | -6 | 2 | 2 | -6 | 2 | 2 | 0 | 0 |
| $\chi_{173}$ | -6 | -12 | -12 | -6 | 2 | 4 | 6 | -2 | -2 | 6 | -2 | -2 | 0 | 0 |
| $\chi_{174}$ | 12 | 6 | 6 | 12 | -4 | -2 | 0 | -4 | -4 | 0 | 0 | 4 | 2 | -2 |
| $\chi_{175}$ | -12 | -6 | -6 | -12 | 4 | 2 | 0 | -4 | -4 | 0 | 0 | 4 | -2 | 2 |
| $\chi_{176}$ | 6 | 12 | 12 | 6 | -2 | -4 | 2 | 2 | 2 | 2 | -6 | 2 | 0 | 0 |
| $\chi_{177}$ | 12 | -6 | -6 | 12 | -4 | 2 | 0 | 4 | 4 | 0 | 0 | -4 | -2 | 2 |
| $\chi_{178}$ | 6 | -12 | -12 | 6 | -2 | 4 | -6 | 2 | 2 | -6 | 2 | 2 | 0 | 0 |
| $\chi_{179}$ | -6 | 12 | 12 | -6 | 2 | -4 | -2 | -2 | -2 | -2 | 6 | -2 | 0 | 0 |
| $\chi_{180}$ | -12 | 6 | 6 | -12 | 4 | -2 | 0 | 4 | 4 | 0 | 0 | -4 | 2 | -2 |
| $\chi_{181}$ | 12 | -6 | -6 | 12 | -4 | 2 | 0 | -4 | -4 | 0 | 0 | 4 | -2 | 2 |
| $\chi_{182}$ | 6 | -12 | -12 | 6 | -2 | 4 | 2 | 2 | 2 | 2 | -6 | 2 | 0 | 0 |
| $\chi_{183}$ | -6 | 12 | 12 | -6 | 2 | -4 | 6 | -2 | -2 | 6 | -2 | -2 | 0 | 0 |
| $\chi_{184}$ | -12 | 6 | 6 | -12 | 4 | -2 | 0 | -4 | -4 | 0 | 0 | 4 | 2 | -2 |
| $\chi_{185}$ | 0 | 6 | 6 | 0 | 0 | -2 | 0 | 4 | 4 | 0 | 0 | -4 | 6 | -6 |
| $\chi_{186}$ | -6 | 0 | 0 | -6 | 2 | 0 | 2 | -6 | -6 | 2 | 10 | -6 | 0 | 0 |
| $\chi_{187}$ | 6 | 0 | 0 | 6 | -2 | 0 | -10 | 6 | 6 | -10 | -2 | 6 | 0 | 0 |
| $\chi_{188}$ | 0 | -6 | -6 | 0 | 0 | 2 | 0 | 4 | 4 | 0 | 0 | -4 | -6 | 6 |
| $\chi_{189}$ | 0 | 6 | 6 | 0 | 0 | -2 | 0 | -4 | -4 | 0 | 0 | 4 | 6 | -6 |
| $\chi_{190}$ | -6 | 0 | 0 | -6 | 2 | 0 | 10 | -6 | -6 | 10 | 2 | -6 | 0 | 0 |
| $\chi_{191}$ | 6 | 0 | 0 | 6 | -2 | 0 | -2 | 6 | 6 | -2 | -10 | 6 | 0 | 0 |
| $\chi_{192}$ | 0 | -6 | -6 | 0 | 0 | 2 | 0 | -4 | -4 | 0 | 0 | 4 | -6 | 6 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | -8 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | -8 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 0 | -8 | 8 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 0 | -8 | 8 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | 0 | 0 |
| $\chi_{201}$ | 0 | 12 | 12 | 0 | 0 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{202}$ | -12 | 0 | 0 | -12 | 4 | 0 | -4 | 4 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{203}$ | 12 | 0 | 0 | 12 | -4 | 0 | 4 | -4 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{204}$ | 0 | -12 | -12 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $2I$ | | | | | | | | $2J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AK$ | $2AL$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $4AF$ | $4AG$ | $2AM$ | $2AN$ | $2AO$ | $2AP$ | $4AH$ | $4AI$ | $4AJ$ | $4AK$ |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | -8 | 8 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 8 | -8 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 8 | -8 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 4 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 8 | -8 |
| $\chi_{157}$ | 6 | 6 | 0 | 0 | -2 | 0 | -2 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{158}$ | -2 | -2 | 0 | 0 | 6 | 0 | -2 | 0 | -2 | -2 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{159}$ | -2 | -2 | -4 | -4 | -2 | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | -6 | -6 |
| $\chi_{160}$ | -2 | -2 | 4 | 4 | -2 | -4 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{161}$ | -2 | -2 | 4 | 4 | -2 | -4 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{162}$ | -2 | -2 | -4 | -4 | -2 | 4 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | -6 | -6 |
| $\chi_{163}$ | -2 | -2 | 0 | 0 | 6 | 0 | -2 | 0 | -2 | -2 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{164}$ | 6 | 6 | 0 | 0 | -2 | 0 | -2 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{165}$ | -4 | -4 | 0 | 0 | -4 | 0 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{166}$ | 4 | 4 | 0 | 0 | 4 | 0 | -4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{167}$ | 4 | 4 | 0 | 0 | 4 | 0 | -4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{168}$ | -4 | -4 | 0 | 0 | -4 | 0 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{169}$ | 6 | 6 | -4 | -4 | -2 | -4 | -2 | 4 | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{170}$ | -2 | -2 | 8 | 8 | -2 | 0 | 2 | -4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{171}$ | -2 | -2 | 0 | 0 | -2 | 8 | 2 | -4 | 2 | 2 | 2 | 2 | 2 | 2 | -6 | -6 |
| $\chi_{172}$ | -2 | -2 | -4 | -4 | 6 | -4 | -2 | 4 | -2 | -2 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{173}$ | -2 | -2 | -4 | -4 | 6 | -4 | -2 | 4 | -2 | -2 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{174}$ | -2 | -2 | 0 | 0 | -2 | 8 | 2 | -4 | 2 | 2 | 2 | 2 | 2 | 2 | -6 | -6 |
| $\chi_{175}$ | -2 | -2 | 8 | 8 | -2 | 0 | 2 | -4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{176}$ | 6 | 6 | -4 | -4 | -2 | -4 | -2 | 4 | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{177}$ | -2 | -2 | -8 | -8 | -2 | 0 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | -6 | -6 |
| $\chi_{178}$ | -2 | -2 | 4 | 4 | 6 | 4 | -2 | -4 | -2 | -2 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{179}$ | 6 | 6 | 4 | 4 | -2 | 4 | -2 | -4 | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{180}$ | -2 | -2 | 0 | 0 | -2 | -8 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{181}$ | -2 | -2 | 0 | 0 | -2 | -8 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{182}$ | 6 | 6 | 4 | 4 | -2 | 4 | -2 | -4 | 6 | 6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{183}$ | -2 | -2 | 4 | 4 | 6 | 4 | -2 | -4 | -2 | -2 | -2 | -2 | 6 | 6 | -2 | -2 |
| $\chi_{184}$ | -2 | -2 | -8 | -8 | -2 | 0 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | -6 | -6 |
| $\chi_{185}$ | 2 | 2 | -4 | -4 | 2 | 4 | -2 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{186}$ | -6 | -6 | 0 | 0 | 2 | 0 | 2 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 |
| $\chi_{187}$ | 2 | 2 | 0 | 0 | -6 | 0 | 2 | 0 | 2 | 2 | 2 | 2 | -6 | -6 | 2 | 2 |
| $\chi_{188}$ | 2 | 2 | 4 | 4 | 2 | -4 | -2 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 6 | 6 |
| $\chi_{189}$ | 2 | 2 | 4 | 4 | 2 | -4 | -2 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | 6 | 6 |
| $\chi_{190}$ | 2 | 2 | 0 | 0 | -6 | 0 | 2 | 0 | 2 | 2 | 2 | 2 | -6 | -6 | 2 | 2 |
| $\chi_{191}$ | -6 | -6 | 0 | 0 | 2 | 0 | 2 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 2 | 2 |
| $\chi_{192}$ | 2 | 2 | -4 | -4 | 2 | 4 | -2 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{193}$ | -8 | -8 | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 8 | 8 | 8 | -8 | -8 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | -8 | -8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| $\chi_{195}$ | 0 | 0 | 8 | 8 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 |
| $\chi_{196}$ | 8 | 8 | 0 | 0 | -8 | 0 | 0 | 0 | -8 | -8 | -8 | -8 | 8 | 8 | 0 | 0 |
| $\chi_{197}$ | 8 | 8 | 0 | 0 | -8 | 0 | 0 | 0 | -8 | -8 | -8 | -8 | 8 | 8 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 8 | 8 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 |
| $\chi_{199}$ | 0 | 0 | -8 | -8 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| $\chi_{200}$ | -8 | -8 | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 8 | 8 | 8 | -8 | -8 | 0 | 0 |
| $\chi_{201}$ | 4 | 4 | 0 | 0 | 4 | 0 | -4 | 0 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{202}$ | -4 | -4 | 0 | 0 | -4 | 0 | 4 | 0 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{203}$ | -4 | -4 | 0 | 0 | -4 | 0 | 4 | 0 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{204}$ | 4 | 4 | 0 | 0 | 4 | 0 | -4 | 0 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | -8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | -16 | 16 | 16 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | -16 | 16 | 16 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 2J | | | 3A | | | | | | | | 3B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2AQ | 4AL | 4AM | 3A | 6A | 6B | 6C | 6D | 6E | 6F | 6G | 3B | 6H | 6I | 6J | 6K | 6L |
| $\chi_{147}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 6 | 6 | -6 | -6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | -6 | -6 | 6 | 6 | 6 | -6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | -6 | -6 | 6 | 6 | 6 | -6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | -2 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | -2 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 2 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | -6 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | -6 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 2 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | -2 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | -2 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | -4 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | -4 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | -4 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | -4 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | -2 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | -6 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 2 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | -2 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | -2 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 2 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | -6 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | -2 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 2 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | -2 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | -2 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | -6 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | -6 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | -2 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | -2 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 2 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | -8 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 8 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 8 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | -8 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 6 | 6 | 6 | 6 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | -6 | -6 | -6 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4A | | | | | 4B | | | | | 4C | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AN$ | $4AO$ | $4AP$ | $4AQ$ | $8A$ | $4AR$ | $4AS$ | $4AT$ | $4AU$ | $8B$ | $4AV$ | $4AW$ | $4AX$ | $4AY$ |
| $\chi_{147}$ | -12 | 12 | -4 | 4 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | -6 | 6 | -2 | 2 | 0 | 6 | -6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 6 | -6 | 2 | -2 | 0 | -6 | 6 | 6 | -6 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | -6 | 6 | -2 | 2 | 0 | 6 | -6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 6 | -6 | 2 | -2 | 0 | -6 | 6 | 6 | -6 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | -12 | 12 | -4 | 4 | 0 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 12 | -12 | 4 | -4 | 0 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{158}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{159}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{160}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{161}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{162}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{163}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{164}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{169}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{170}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{171}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{172}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{173}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{174}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{175}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{176}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{177}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{178}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{179}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{180}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{181}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{182}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{183}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{184}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{185}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{186}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{187}$ | -6 | -6 | 2 | 2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{188}$ | 6 | 6 | -2 | -2 | 0 | -6 | -6 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{189}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{190}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{191}$ | 6 | 6 | -2 | -2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{192}$ | -6 | -6 | 2 | 2 | 0 | 6 | 6 | -2 | -2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | | | 4D | | | | 4E | | | | | | 4F | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4AZ | 4BA | 4BB | 4BC | 4BD | 4BE | 4BF | 4BG | 4BH | 4BI | 4BJ | 4BK | 4BL | 4BM | 4BN | 8C | 8D |
| $\chi_{147}$ | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 4 | -4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 4 | -4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 2 | 2 | -2 | 0 | 2 | 2 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{158}$ | 2 | 2 | -2 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{159}$ | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{160}$ | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{161}$ | -2 | -2 | 2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{162}$ | -2 | -2 | 2 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{163}$ | 2 | 2 | -2 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{164}$ | 2 | 2 | -2 | 0 | -2 | -2 | 2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{165}$ | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 4 | 4 | -4 | 0 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 4 | 4 | -4 | 0 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | -4 | -4 | 4 | 0 | 0 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | -2 | -2 | 2 | 0 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{170}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{171}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{172}$ | -2 | -2 | 2 | 0 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{173}$ | -2 | -2 | 2 | 0 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{174}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{175}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{176}$ | -2 | -2 | 2 | 0 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{177}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{178}$ | -2 | -2 | 2 | 0 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{179}$ | -2 | -2 | 2 | 0 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{180}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{181}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{182}$ | -2 | -2 | 2 | 0 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{183}$ | -2 | -2 | 2 | 0 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{184}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{185}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{186}$ | -2 | -2 | 2 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{187}$ | -2 | -2 | 2 | 0 | 2 | 2 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{188}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{189}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{190}$ | -2 | -2 | 2 | 0 | -2 | -2 | 2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{191}$ | -2 | -2 | 2 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{192}$ | 2 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | -2 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | -4 | -4 | 4 | 0 | 0 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 4 | 4 | -4 | 0 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 4 | 4 | -4 | 0 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | 4G | | | | | | 4H | | | | | | 4I | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4BO | 4BP | 4BQ | 4BR | 8E | 8F | 4BS | 4BT | 4BU | 4BV | 8G | 8H | 4BW | 4BX | 4BY | 4BZ | 4CA |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 |
| $\chi_{151}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 |
| $\chi_{152}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 |
| $\chi_{153}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{158}$ | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{163}$ | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{164}$ | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{172}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{173}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{176}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{178}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{179}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{182}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{183}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{186}$ | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{187}$ | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{190}$ | 2 | 2 | -2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | -2 | -2 | -2 | -2 | 0 |
| $\chi_{191}$ | -2 | -2 | 2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 2 | 2 | 2 | 2 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $4I$ | | | $4J$ | | | | | | $5A$ | | | | | | $6A$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4CB$ | $8I$ | $8J$ | $4CC$ | $4CD$ | $4CE$ | $4CF$ | $8K$ | $8L$ | $5A$ | $10A$ | $10B$ | $10C$ | $10D$ | $10E$ | $6M$ | $6N$ |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{158}$ | 0 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{159}$ | 2 | 0 | -2 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{160}$ | -2 | 0 | 2 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{161}$ | -2 | 0 | 2 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{162}$ | 2 | 0 | -2 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{163}$ | 0 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{164}$ | 0 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{169}$ | -2 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | -2 | 0 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 2 | 0 | -2 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 2 | 0 | -2 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | -2 | 0 | 2 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | -2 | 0 | 2 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 2 | 0 | -2 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 2 | 0 | -2 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | -2 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | -2 | 0 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | -2 | 0 | 2 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 2 | 0 | -2 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 2 | 0 | -2 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | -2 | 0 | 2 | 2 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6A$ | | | $6B$ | | | | $6C$ | | | | | $6D$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $12A$ | $12B$ | $6O$ | $6P$ | $6Q$ | $12C$ | $12D$ | $6R$ | $12E$ | $12F$ | $6S$ | $12G$ | $6T$ | $6U$ | $12H$ | $12I$ |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 2 | 2 | 2 | -2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 2 | 2 | 2 | -2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 2 | 2 | 2 | -2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 2 | 2 | 2 | -2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | -2 | -2 | -2 | 2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | -2 | -2 | -2 | 2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | -2 | -2 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | -2 | -2 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | -2 | -2 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | -2 | -2 | -2 | 2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 2 | 2 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 2 | 2 | 2 | -2 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | | $6F$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6V$ | $6W$ | $6X$ | $6Y$ | $12J$ | $12K$ | $12L$ | $12M$ | $6Z$ | $6AA$ | $6AB$ | $12N$ | $12O$ | $12P$ | $12Q$ |
| $\chi_{147}$ | 2 | -2 | 2 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | -2 | 2 | -2 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 2 | -2 | 2 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | -2 | 2 | -2 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 2 | -2 | 2 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 2 | 2 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{158}$ | 2 | 2 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{163}$ | -2 | -2 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{164}$ | -2 | -2 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{166}$ | 2 | 2 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{167}$ | -2 | -2 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | -2 | -2 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{196}$ | 2 | 2 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{197}$ | -2 | -2 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{200}$ | 2 | 2 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | 0 | -2 | -2 | 0 | 2 |
| $\chi_{206}$ | 2 | 2 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 |
| $\chi_{207}$ | -2 | -2 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 0 | -2 |
| $\chi_{209}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $6G$ | | | | $6H$ | | | | | | $8A$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $6AD$ | $12R$ | $12S$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8K$ | $8L$ | $8M$ |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 7.29 : Character Table of $2^7 : (2^5 : S_6)$(continued)

| | $8B$ | | | $10A$ | | | | $12A$ | | | $12B$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8N$ | $8O$ | $8P$ | $10F$ | $10G$ | $20A$ | $20B$ | $12T$ | $12U$ | $24A$ | $12V$ | $12W$ | $24B$ |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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### 7.3.6 The Fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$

We use the results of Subsection 7.3.1 to compute the power maps of the elements of $2^7 : (2^5 : S_6)$ which are listed in Table 7.30 below.

Table 7.30: The power maps of the elements of $2^7 : (2^5 : S_6)$

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|
| $1A$ | $1A$ | | | | |
| | $2A$ | $1A$ | | | |
| | $2B$ | $1A$ | | | |
| | $2C$ | $1A$ | | | |
| | $2D$ | $1A$ | | | |
| | $2E$ | $1A$ | | | |
| | $2F$ | $1A$ | | | |
| | $2G$ | $1A$ | | | |
| $2B$ | $2K$ | $1A$ | | | |
| | $2L$ | $1A$ | | | |
| | $2M$ | $1A$ | | | |
| | $2N$ | $1A$ | | | |
| | $4C$ | $2A$ | | | |
| | $4D$ | $2E$ | | | |
| $2D$ | $2R$ | $1A$ | | | |
| | $2S$ | $1A$ | | | |
| | $4H$ | $2E$ | | | |
| | $4I$ | $2E$ | | | |
| | $2T$ | $1A$ | | | |
| | $4J$ | $2D$ | | | |
| | $4K$ | $2C$ | | | |
| | $2T$ | $1A$ | | | |
| | $4J$ | $2D$ | | | |
| | $4K$ | $2C$ | | | |
| $2F$ | $2AA$ | $1A$ | | | |
| | $2AB$ | $1A$ | | | |
| | $2AC$ | $1A$ | | | |
| | $2AD$ | $1A$ | | | |
| | $2AE$ | $1A$ | | | |
| | $2AF$ | $1A$ | | | |
| | $4P$ | $2E$ | | | |
| | $4Q$ | $2E$ | | | |
| $2H$ | $2AI$ | | $1A$ | | |
| | $4V$ | $2D$ | | | |
| | $4W$ | $2D$ | | | |
| | $2AJ$ | $1A$ | | | |
| | $4X$ | $2A$ | | | |
| | $4Y$ | $2D$ | | | |
| | $4Z$ | $2D$ | | | |
| | $4AA$ | $2E$ | | | |
| $2J$ | $2AM$ | $1A$ | | | |
| | $2AN$ | $1A$ | | | |
| | $2AO$ | $1A$ | | | |
| | $2AP$ | $1A$ | | | |
| | $4AH$ | $2E$ | | | |
| | $4AI$ | $2E$ | | | |
| | $4AJ$ | $2E$ | | | |
| | $4AK$ | $2E$ | | | |
| | $2AQ$ | $1A$ | | | |
| | $4AL$ | $2D$ | | | |
| | $4AM$ | $2D$ | | | |

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|
| $2A$ | $2H$ | $1A$ | | | |
| | $2I$ | $1A$ | | | |
| | $4A$ | $2C$ | | | |
| | $4B$ | $2C$ | | | |
| | $2J$ | $1A$ | | | |
| $2C$ | $2O$ | $1A$ | | | |
| | $2P$ | $1A$ | | | |
| | $4E$ | $2A$ | | | |
| | $4F$ | $2A$ | | | |
| | $2Q$ | $1A$ | | | |
| | $4G$ | $2D$ | | | |
| $2E$ | $2U$ | $1A$ | | | |
| | $2V$ | $1A$ | | | |
| | $2W$ | $1A$ | | | |
| | $2X$ | $1A$ | | | |
| | $4L$ | $2D$ | | | |
| | $4M$ | $2D$ | | | |
| | $4N$ | $2D$ | | | |
| | $4O$ | $2D$ | | | |
| | $2Y$ | $1A$ | | | |
| | $2Z$ | $1A$ | | | |
| $2G$ | $2AG$ | $1A$ | | | |
| | $4R$ | $2C$ | | | |
| | $4S$ | $2C$ | | | |
| | $2AH$ | $1A$ | | | |
| | $4T$ | $2E$ | | | |
| | $4U$ | $2D$ | | | |
| $2I$ | $2AK$ | $1A$ | | | |
| | $2AL$ | $1A$ | | | |
| | $4AB$ | $2D$ | | | |
| | $4AC$ | $2D$ | | | |
| | $4AD$ | $2E$ | | | |
| | $4AE$ | $2C$ | | | |
| | $4AF$ | $2D$ | | | |
| | $4AG$ | $2E$ | | | |
| $3A$ | $3A$ | | $1A$ | | |
| | $6A$ | $3A$ | $2A$ | | |
| | $6B$ | $3A$ | $2C$ | | |
| | $6C$ | $3A$ | $2B$ | | |
| | $6D$ | $3A$ | $2E$ | | |
| | $6E$ | $3A$ | $2D$ | | |
| | $6F$ | $3A$ | $2G$ | | |
| | $6G$ | $3A$ | $2F$ | | |

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Table 7.30 : The power maps of the elements of $2^7 : (2^5 : S_6)$

| $[g]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|
| $3B$ | $3B$ | | $1A$ | | |
| | $6H$ | $3B$ | $2A$ | | |
| | $6I$ | $3B$ | $2B$ | | |
| | $6J$ | $3B$ | $2C$ | | |
| | $6K$ | $3B$ | $2F$ | | |
| | $6L$ | $3B$ | $2G$ | | |
| $4B$ | $4AR$ | $2O$ | | | |
| | $4AS$ | $2O$ | | | |
| | $4AT$ | $2O$ | | | |
| | $4AU$ | $2O$ | | | |
| | $8B$ | $4E$ | | | |
| $4D$ | $4AZ$ | $2K$ | | | |
| | $4BA$ | $2K$ | | | |
| | $4BB$ | $2N$ | | | |
| | $4BC$ | $2M$ | | | |
| $4F$ | $4BI$ | $2AM$ | | | |
| | $4BJ$ | $2AM$ | | | |
| | $4BK$ | $2AM$ | | | |
| | $4BL$ | $2AM$ | | | |
| | $4BM$ | $2AM$ | | | |
| | $4BN$ | $2AM$ | | | |
| | $8C$ | $4AH$ | | | |
| | $8D$ | $4AH$ | | | |
| $4H$ | $4BS$ | $2AM$ | | | |
| | $4BT$ | $2AM$ | | | |
| | $4BU$ | $2AO$ | | | |
| | $4BV$ | $2AO$ | | | |
| | $8G$ | $4AI$ | | | |
| | $8H$ | $4AH$ | | | |
| $4J$ | $4CC$ | $2AM$ | | | |
| | $4CD$ | $2AM$ | | | |
| | $4CE$ | $2AO$ | | | |
| | $4CF$ | $2AO$ | | | |
| | $8K$ | $4AH$ | | | |
| | $8L$ | $4AI$ | | | |
| $6A$ | $6M$ | $3A$ | $2H$ | | |
| | $6N$ | $3A$ | $2I$ | | |
| | $12A$ | $6B$ | $4B$ | | |
| | $12B$ | $6B$ | $4A$ | | |
| | $6O$ | $3A$ | $2J$ | | |
| $6C$ | $6R$ | $3A$ | $2O$ | | |
| | $12E$ | $6A$ | $4F$ | | |
| | $12F$ | $6A$ | $4E$ | | |
| | $6S$ | $3A$ | $2P$ | | |
| | $12G$ | $6E$ | $4G$ | | |
| $6E$ | $6V$ | $3A$ | $2U$ | | |
| | $6W$ | $3A$ | $2X$ | | |
| | $6X$ | $3A$ | $2W$ | | |
| | $6Y$ | $3A$ | $2V$ | | |
| | $12J$ | $6E$ | $4O$ | | |
| | $12K$ | $6E$ | $4L$ | | |
| | $12L$ | $6E$ | $4M$ | | |
| | $12M$ | $6E$ | $4N$ | | |
| | $6Z$ | $3A$ | $2Y$ | | |
| $6G$ | $6AC$ | $3B$ | $2AG$ | | |
| | $6AD$ | $3B$ | $2AH$ | | |
| | $12R$ | $6J$ | $4R$ | | |
| | $12S$ | $6J$ | $4S$ | | |

| $[g]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|
| $4A$ | $4AN$ | $2O$ | | | |
| | $4AO$ | $2O$ | | | |
| | $4AP$ | $2O$ | | | |
| | $4AQ$ | $2O$ | | | |
| | $8A$ | $4F$ | | | |
| $4C$ | $4AV$ | $2K$ | | | |
| | $4AW$ | $2K$ | | | |
| | $4AX$ | $2N$ | | | |
| | $4AY$ | $2N$ | | | |
| $4E$ | $4BD$ | $2K$ | | | |
| | $4BE$ | $2K$ | | | |
| | $4BF$ | $2M$ | | | |
| | $4BG$ | $2M$ | | | |
| | $4BH$ | $2N$ | | | |
| $4G$ | $4BO$ | $2O$ | | | |
| | $4BP$ | $2O$ | | | |
| | $4BQ$ | $2Q$ | | | |
| | $4BR$ | $2Q$ | | | |
| | $8E$ | $4F$ | | | |
| | $8F$ | $4E$ | | | |
| $4I$ | $4BW$ | $2AM$ | | | |
| | $4BX$ | $2AM$ | | | |
| | $4BY$ | $2AM$ | | | |
| | $4BZ$ | $2AM$ | | | |
| | $4CA$ | $2AM$ | | | |
| | $4CB$ | $2AM$ | | | |
| | $8I$ | $4AI$ | | | |
| | $8J$ | $4AI$ | | | |
| $5A$ | $5A$ | | | $1A$ | |
| | $10A$ | $5A$ | | $2C$ | |
| | $10B$ | $5A$ | | $2B$ | |
| | $10C$ | $5A$ | | $2A$ | |
| | $10D$ | $5A$ | | $2F$ | |
| | $10E$ | $5A$ | | $2G$ | |
| $6B$ | $6P$ | $3A$ | $2K$ | | |
| | $6Q$ | $3A$ | $2L$ | | |
| | $12C$ | $6A$ | $4C$ | | |
| | $12D$ | $6D$ | $4D$ | | |
| $6D$ | $6T$ | $3B$ | $2H$ | | |
| | $6U$ | $3B$ | $2I$ | | |
| | $12H$ | $6J$ | $4B$ | | |
| | $12I$ | $6J$ | $4A$ | | |
| $6F$ | $6AA$ | $3A$ | $2R$ | | |
| | $6AB$ | $3A$ | $2S$ | | |
| | $12N$ | $6G$ | $4I$ | | |
| | $12O$ | $6G$ | $4H$ | | |
| | $12P$ | $6F$ | $4J$ | | |
| | $12Q$ | $6F$ | $4K$ | | |
| $6H$ | $6AE$ | $3B$ | $2AA$ | | |
| | $6AF$ | $3B$ | $2AB$ | | |
| | $6AG$ | $3B$ | $2AC$ | | |
| | $6AH$ | $3B$ | $2AD$ | | |
| | $6AI$ | $3B$ | $2AE$ | | |
| | $6AJ$ | $3B$ | $2AF$ | | |

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Table 7.30 : The power maps of the elements of $2^7 : (2^5 : S_6)$

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $8A$ | $8K$ | $4AZ$ | | | | $8B$ | $8N$ | $4AV$ | | | |
| | $8L$ | $4AZ$ | | | | | $8O$ | $4AV$ | | | |
| | $8M$ | $4BB$ | | | | | $8P$ | $4AX$ | | | |
| $10A$ | $10F$ | $5A$ | | $2H$ | | $12A$ | $12T$ | $6R$ | $4AR$ | | |
| | $10G$ | $5A$ | | $2I$ | | | $12U$ | $6R$ | $4AS$ | | |
| | $20A$ | $10A$ | | $4A$ | | | $24A$ | $12F$ | $8B$ | | |
| | $20B$ | $10A$ | | $4B$ | | | | | | | |
| $12B$ | $12V$ | $6R$ | $4AN$ | | | | | | | | |
| | $12W$ | $6R$ | $4AO$ | | | | | | | | |
| | $24B$ | $12E$ | $8E$ | | | | | | | | |

We are able to obtain the partial fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ by using the information provided by the conjugacy classes of the elements of $2^7 : (2^5 : S_6)$ and $2^7 : Sp_6(2)$ , and the fusion map of $2^5 : S_6$ into $Sp_6(2)$. We used the technique of set intersections for characters(discussed in Section 7.1.6) to restrict the irreducible characters $63a$, $63b$ , $36a$ , $36b$, $28a$ and $28b$ of $2^7 : Sp_6(2)$ to $2^7 : (2^5 : S_6)$ to determine fully the fusion of the classes of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$. Hence based on the partial fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ which has already been determined , we obtain that

$$
\begin{aligned}
(63a)_{2^7:(2^5:S_6)} &= \chi_{38} + \chi_{157} + \chi_{209} \\
(63b)_{2^7:(2^5:S_6)} &= \chi_{39} + \chi_{160} + \chi_{210} \\
(36a)_{2^7:(2^5:S_6)} &= \chi_{115} + \chi_{137} \\
(36b)_{2^7:(2^5:S_6)} &= \chi_{118} + \chi_{139} \\
(28a)_{2^7:(2^5:S_6)} &= \chi_{75} + \chi_{93} \\
(28b)_{2^7:(2^5:S_6)} &= \chi_{76} + \chi_{94}
\end{aligned}
$$

Using the partial fusion already determined and the values of $63a$, $63b$ , $36a$ , $36b$, $28a$ and $28b$ on the classes of $2^7 : Sp_6(2)$ and the values of $(63a)_{2^7:(2^5:S_6)}$, $(63a)_{2^7:(2^5:S_6)}$, $(36a)_{2^7:(2^5:S_6)}$, $(36b)_{2^7:(2^5:S_6)}$, $(28a)_{2^7:(2^5:S_6)}$ and $(28b)_{2^7:(2^5:S_6)}$ on the classes of $2^7 : (2^5 : S_6)$, we are able to complete the fusion map of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ and this is given in Table 7.31.

Table 7.31: The fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | $1A$ | $2A$ | $2H$ | | $2D$ |
| | $2A$ | | $2B$ | | $2I$ | | $2E$ |
| | $2B$ | | $2C$ | | $4A$ | | $4A$ |
| | $2C$ | | $2A$ | | $4B$ | | $4B$ |
| | $2D$ | | $2C$ | | $2J$ | | $2F$ |
| | $2E$ | | $2B$ | | | | |
| | $2F$ | | $2B$ | | | | |
| | $2G$ | | $2C$ | | | | |
| $2B$ | $2K$ | | $2G$ | $2C$ | $2O$ | | $2K$ |
| | $2L$ | | $2H$ | | $2P$ | | $2L$ |
| | $2M$ | | $2J$ | | $4E$ | | $4D$ |
| | $2N$ | | $2I$ | | $4F$ | | $4E$ |
| | $4C$ | | $4C$ | | $2Q$ | | $2M$ |
| | $4D$ | | $4C$ | | $4G$ | | $4F$ |
| $2D$ | $2R$ | | $2K$ | $2E$ | $2U$ | | $2D$ |
| | $2S$ | | $2L$ | | $2V$ | | $2E$ |
| | $4H$ | | $4E$ | | $2W$ | | $2F$ |
| | $4I$ | | $4D$ | | $2X$ | | $2F$ |
| | $2T$ | | $2M$ | | $4L$ | | $4A$ |
| | $4J$ | | $4F$ | | $4M$ | | $4B$ |
| | $4K$ | | $4F$ | | $4N$ | | $4B$ |
| | | | | | $4O$ | | $4A$ |
| | | | | | $2Y$ | | $2F$ |
| | | | | | $2Z$ | | $2F$ |
| $2F$ | $2AA$ | | $2G$ | $2G$ | $2AG$ | | $2N$ |
| | $2AB$ | | $2H$ | | $4R$ | | $4G$ |
| | $2AC$ | | $2I$ | | $4S$ | | $4H$ |
| | $2AD$ | | $2J$ | | $2AH$ | | $2O$ |
| | $2AE$ | | $2I$ | | $4T$ | | $4I$ |
| | $2AF$ | | $2J$ | | $4U$ | | $4J$ |
| | $4P$ | | $4C$ | | | | |
| | $4Q$ | | $4C$ | | | | |
| $2H$ | $2AI$ | | $2N$ | $2I$ | $2AK$ | | $2N$ |
| | $4V$ | | $4H$ | | $2AL$ | | $2O$ |
| | $4W$ | | $4G$ | | $4AB$ | | $4G$ |
| | $2AJ$ | | $2O$ | | $4AC$ | | $4H$ |
| | $4X$ | | $4I$ | | $4AD$ | | $4I$ |
| | $4Y$ | | $4J$ | | $4AE$ | | $4J$ |
| | $4Z$ | | $4J$ | | $4AF$ | | $4J$ |
| | $4AA$ | | $4I$ | | $4AG$ | | $4I$ |
| $2J$ | $2AM$ | | $2K$ | $3A$ | $3A$ | | $3A$ |
| | $2AN$ | | $2L$ | | $6A$ | | $6B$ |
| | $2AO$ | | $2M$ | | $6B$ | | $6C$ |
| | $2AP$ | | $2M$ | | $6C$ | | $6A$ |
| | $4AH$ | | $4D$ | | $6D$ | | $6B$ |
| | $4AI$ | | $4E$ | | $6E$ | | $6C$ |
| | $4AJ$ | | $4D$ | | $6F$ | | $6C$ |
| | $4AK$ | | $4E$ | | $6G$ | | $6B$ |
| | $2AQ$ | | $2M$ | | | | |
| | $4AL$ | | $4F$ | | | | |
| | $4AM$ | | $4F$ | | | | |
| $3B$ | $3B$ | | $3C$ | $4A$ | $4AN$ | | $4R$ |
| | $6H$ | | $6F$ | | $4AO$ | | $4S$ |
| | $6I$ | | $6E$ | | $4AP$ | | $4T$ |
| | $6J$ | | $6G$ | | $4AQ$ | | $4U$ |
| | $6K$ | | $6F$ | | $8A$ | | $8B$ |
| | $6L$ | | $6G$ | | | | |
| $4B$ | $4AR$ | | $4N$ | $4C$ | $4AV$ | | $4K$ |
| | $4AS$ | | $4O$ | | $4AW$ | | $4L$ |
| | $4AT$ | | $4Q$ | | $4AX$ | | $4M$ |
| | $4AU$ | | $4P$ | | $4AY$ | | $4M$ |
| | $8B$ | | $8A$ | | | | |

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Table 7.31 :The fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $4D$ | $4AZ$ | | $4V$ | $4E$ | $4BD$ | | $4V$ |
| | $4BA$ | | $4W$ | | $4BE$ | | $4W$ |
| | $4BB$ | | $4X$ | | $4BF$ | | $4Y$ |
| | $4BC$ | | $4Y$ | | $4BG$ | | $4Y$ |
| | | | | | $4BH$ | | $4X$ |
| $4F$ | $4BI$ | | $4N$ | $4G$ | $4BO$ | | $4Z$ |
| | $4BJ$ | | $4O$ | | $4BP$ | | $4AA$ |
| | $4BK$ | | $4P$ | | $4BQ$ | | $4AB$ |
| | $4BL$ | | $4Q$ | | $4BR$ | | $4AC$ |
| | $4BM$ | | $4Q$ | | $8E$ | | $8D$ |
| | $4BN$ | | $4P$ | | $8F$ | | $8C$ |
| | $8C$ | | $8A$ | | | | |
| | $8D$ | | $8A$ | | | | |
| $4H$ | $4BS$ | | $4Z$ | $4I$ | $4BW$ | | $4R$ |
| | $4BT$ | | $4AA$ | | $4BX$ | | $4S$ |
| | $4BU$ | | $4AB$ | | $4BY$ | | $4U$ |
| | $4BV$ | | $4AC$ | | $4BZ$ | | $4T$ |
| | $8G$ | | $8D$ | | $4CA$ | | $4T$ |
| | $8H$ | | $8C$ | | $4CB$ | | $4U$ |
| | | | | | $8I$ | | $8B$ |
| | | | | | $8J$ | | $8B$ |
| $4J$ | $4CC$ | | $4Z$ | $5A$ | $5A$ | | $5A$ |
| | $4CD$ | | $4AA$ | | $10A$ | | $10B$ |
| | $4CE$ | | $4AB$ | | $10B$ | | $10A$ |
| | $4CF$ | | $4AC$ | | $10C$ | | $10C$ |
| | $8K$ | | $8C$ | | $10D$ | | $10C$ |
| | $8L$ | | $8D$ | | $10E$ | | $10B$ |
| $6A$ | $6M$ | | $6H$ | $6B$ | $6P$ | | $6K$ |
| | $6N$ | | $6I$ | | $6Q$ | | $6L$ |
| | $12A$ | | $12B$ | | $12C$ | | $12C$ |
| | $12B$ | | $12A$ | | $12D$ | | $12C$ |
| | $6O$ | | $6J$ | | | | |
| $6C$ | $6R$ | | $6O$ | $6D$ | $6T$ | | $6U$ |
| | $12E$ | | $12E$ | | $6U$ | | $6V$ |
| | $12F$ | | $12D$ | | $12H$ | | $12G$ |
| | $6S$ | | $6P$ | | $12I$ | | $12H$ |
| | $12G$ | | $12F$ | | | | |
| $6E$ | $6V$ | | $6H$ | $6F$ | $6AA$ | | $6O$ |
| | $6W$ | | $6J$ | | $6AB$ | | $6P$ |
| | $6X$ | | $6J$ | | $12N$ | | $12D$ |
| | $6Y$ | | $6I$ | | $12O$ | | $12E$ |
| | $12J$ | | $12A$ | | $12P$ | | $12F$ |
| | $12K$ | | $12A$ | | $12Q$ | | $12F$ |
| | $12L$ | | $12B$ | | | | |
| | $12M$ | | $12B$ | | | | |
| | $6Z$ | | $6J$ | | | | |
| $6G$ | $6AC$ | | $6W$ | $6H$ | $6AE$ | | $6Q$ |
| | $6AD$ | | $6X$ | | $6AF$ | | $6R$ |
| | $12R$ | | $12I$ | | $6AG$ | | $6T$ |
| | $12S$ | | $12J$ | | $6AH$ | | $6S$ |
| | | | | | $6AI$ | | $6T$ |
| | | | | | $6AJ$ | | $6S$ |
| $8A$ | $8K$ | | $8E$ | $8B$ | $8N$ | | $8H$ |
| | $8L$ | | $8F$ | | $8O$ | | $8I$ |
| | $8M$ | | $8G$ | | $8P$ | | $8J$ |
| $10A$ | $10F$ | | $10D$ | $12A$ | $12T$ | | $12K$ |
| | $10G$ | | $10E$ | | $12U$ | | $12L$ |
| | $20A$ | | $20A$ | | $24A$ | | $24A$ |
| | $20B$ | | $20B$ | | | | |
| $12B$ | $12V$ | | $12M$ | | | | |
| | $12W$ | | $12N$ | | | | |
| | $24B$ | | $24B$ | | | | |

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# Chapter 8

# The inertia groups of $2^7 : Sp_6(2)$ ,a maximal subgroup of $\bar{F}i_{22}$

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In this chapter we study the inertia groups of $2^7 : Sp_6(2)$ which is a maximal subgroup of $\bar{F}i_{22}$. $\bar{F}i_{22}$ is the full automorphism group of the smallest Fischer simple group $Fi_{22}$. Moori and Mpono [34] constructed the character table of $\overline{G} = 2^7 : Sp_6(2)$ by means of its Fischer-Clifford matrices. Moori and Ali [2] studied another group of the form $E = 2^7 : Sp_6(2)$ which has 114 conjugacy classes where as the group $\overline{G}$ has 134 conjugacy classes and hence $\overline{G}$ is not isomorphic to $E$.

$2^7 : Sp_6(2)$ acts on $Irr(2^7)$ to produce four inertia groups $H_i = 2^7 : \bar{H}_i$ of indices $1, 1, 63, 63$ in $2^7 : Sp_6(2)$, where $i \in 1, 2, 3, 4$. Moori and Mpono [34] obtain that $\bar{H}_1 = \bar{H}_2 \cong Sp_6(2)$ and $\bar{H}_3 = \bar{H}_4 \cong 2^5 : S_6$ of indices $1, 1, 63, 63$ in $Sp_6(2)$ respectively. We will construct the Fischer-Clifford matrices of $2^7 : (2^5 : S_6)$ and through this matrices obtain the charactertable of $2^7 : (2^5 : S_6)$. Motivation for this problem came from the Ph.D thesis of Mpono[35].

## 8.1 The group $2^7 : (2^5 : S_6)$

Let $G = 2^7 : (2^5 : S_6)$ be the inertia group of $2^7 : Sp_6(2)$, which is a split extension of $K = 2^7$ by $Q = 2^5 : S_6$ , where $K$ is the vector space of dimension 7 over $GF(2)$ on which $Q$ acts. Note that the group $G$ is not isomorphic to the one of the same form we studied in Section 7.3. We will show that this group has 274 conjugacy classes while the group in Section 7.3 has 219.

## 8.2 The conjugacy classes of $2^7 : (2^5 : S_6)$

In this section we use the method of coset analysis discussed in Chapter 3, to determine the conjugacy classes of elements of $2^7 : (2^5 : S_6)$ . We generated $2^5 : S_6$ by two elements $q_1 \in 2B$ and $q_2 \in 12A$ of $Sp_6(2)$. Mpono [35] constructed $Sp_6(2)$ in terms of $7 \times 7$ matrices over $GF(2)$. Here $2B$ and $12A$ are conjugacy classes of elements of $Sp_6(2)$ and $q_1$ and $q_2$ are given by :

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$$q_1 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 1 & 0 & 1 & 0 \\ 1 & 1 & 0 & 0 & 0 & 0 & 1 \end{pmatrix} \quad q_2 = \begin{pmatrix} 0 & 0 & 1 & 1 & 0 & 1 & 0 \\ 1 & 1 & 0 & 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 1 & 0 \\ 0 & 0 & 1 & 1 & 1 & 0 & 0 \\ 1 & 1 & 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 1 & 1 & 0 \\ 1 & 0 & 1 & 0 & 1 & 1 & 1 \end{pmatrix}$$

The elements $q_1$ and $q_2$ are of orders 2 and 12, respectively. We obtained the conjugacy classes of $2^5 : S_6$ using MAGMA and are represented in the table below. The class representatives of each class $[q]_{2^5:S_6}$ of $2^5 : S_6$ are given in terms of $7 \times 7$ matrices over $GF(2)$.

Table 8.1: The Conjugacy classes of $2^5 : S_6$

| $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ | $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ |
|---|---|---|---|---|---|
| $1A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&0&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1 | $2A$ | $\begin{pmatrix} 0&1&1&1&1&1&0\\ 1&0&1&1&1&1&0\\ 1&1&0&1&1&1&0\\ 1&1&1&0&1&1&0\\ 1&1&1&1&0&1&0\\ 1&1&1&1&1&0&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 1 |
| $2B$ | $\begin{pmatrix} 1&1&0&0&1&0&0\\ 1&1&1&1&0&1&0\\ 0&1&1&0&1&0&0\\ 0&1&0&1&1&0&0\\ 1&0&1&1&1&1&0\\ 0&1&0&0&1&1&0\\ 0&1&0&0&1&0&1 \end{pmatrix}$ | 15 | $2C$ | $\begin{pmatrix} 0&0&0&0&0&1&0\\ 0&0&1&1&1&0&0\\ 0&1&0&1&1&0&0\\ 0&1&1&0&1&0&0\\ 0&1&1&1&0&0&0\\ 1&0&0&0&0&0&0\\ 1&0&0&0&0&1&1 \end{pmatrix}$ | 15 |
| $2D$ | $\begin{pmatrix} 0&0&1&0&0&0&0\\ 1&1&1&0&0&0&0\\ 1&0&0&0&0&0&0\\ 1&1&1&0&1&1&0\\ 1&0&1&0&1&0&0\\ 1&1&1&1&1&0&0\\ 0&1&0&1&1&1&1 \end{pmatrix}$ | 30 | $2E$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 1&0&1&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&0&1&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 30 |
| $2F$ | $\begin{pmatrix} 0&1&1&1&1&1&0\\ 1&0&1&1&1&1&0\\ 0&0&0&1&1&1&0\\ 1&1&1&0&1&1&0\\ 0&1&1&0&0&1&0\\ 1&0&1&0&1&0&0\\ 1&1&0&0&0&0&1 \end{pmatrix}$ | 60 | $2G$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 1&0&0&1&1&0&0\\ 0&1&0&1&0&1&0\\ 1&1&0&1&0&1&0 \end{pmatrix}$ | 60 |
| $2H$ | $\begin{pmatrix} 0&1&1&0&1&0&0\\ 0&0&0&1&0&1&0\\ 0&1&1&1&0&0&0\\ 0&1&0&1&0&1&0\\ 1&1&1&1&0&1&0\\ 0&1&0&0&0&0&0\\ 1&0&1&0&1&1&1 \end{pmatrix}$ | 180 | $2I$ | $\begin{pmatrix} 0&1&1&0&1&0&0\\ 0&1&0&1&0&1&0\\ 1&1&0&0&1&0&0\\ 1&0&1&0&0&1&0\\ 0&0&0&1&1&1&0\\ 1&0&1&1&0&0&0\\ 0&0&0&1&0&1&1 \end{pmatrix}$ | 180 |
| $2J$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 0&0&0&1&0&0&0\\ 1&0&0&1&1&0&0\\ 0&1&0&0&0&0&0\\ 1&1&1&0&0&0&0\\ 0&1&0&1&0&1&0\\ 1&0&1&1&1&0&1 \end{pmatrix}$ | 180 | $3A$ | $\begin{pmatrix} 1&0&0&0&0&0&0\\ 1&1&0&0&1&0&0\\ 0&0&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&0&0&0&1&0\\ 0&1&0&0&1&0&1 \end{pmatrix}$ | 160 |
| $3B$ | $\begin{pmatrix} 1&1&0&0&0&1&0\\ 1&0&1&0&0&1&0\\ 1&1&1&1&1&0&0\\ 0&1&1&1&1&1&0\\ 1&0&0&1&0&1&0\\ 1&0&0&0&1&1&0\\ 0&1&1&0&1&1&1 \end{pmatrix}$ | 640 | $4A$ | $\begin{pmatrix} 0&1&0&1&1&0&0\\ 0&1&1&0&0&1&0\\ 0&0&0&0&0&1&0\\ 1&0&0&1&0&1&0\\ 0&0&1&0&1&1&0\\ 0&1&1&1&1&1&0\\ 0&0&1&0&0&1&1 \end{pmatrix}$ | 120 |
| $4B$ | $\begin{pmatrix} 0&1&0&0&1&1&0\\ 1&0&0&0&1&1&0\\ 0&0&0&1&0&0&0\\ 0&1&1&1&1&1&0\\ 1&1&0&0&0&1&0\\ 1&0&0&1&0&1&0\\ 1&1&0&0&1&1&1 \end{pmatrix}$ | 120 | $4C$ | $\begin{pmatrix} 0&0&0&1&0&0&0\\ 1&0&0&0&0&0&0\\ 0&0&0&0&1&0&0\\ 1&1&0&1&0&0&0\\ 1&0&0&0&1&1&0\\ 0&0&1&1&1&0&0\\ 0&0&1&0&1&0&1 \end{pmatrix}$ | 180 |
| $4D$ | $\begin{pmatrix} 0&0&0&0&0&1&0\\ 0&1&1&0&1&0&0\\ 0&0&0&1&1&1&0\\ 0&0&1&1&1&0&0\\ 0&1&1&0&0&1&0\\ 1&1&0&1&0&0&0\\ 1&1&0&0&0&0&1 \end{pmatrix}$ | 180 | $4E$ | $\begin{pmatrix} 1&1&0&0&1&0&0\\ 1&1&1&1&0&1&0\\ 0&1&0&1&0&1&0\\ 0&1&0&1&1&0&0\\ 0&0&1&0&1&1&0\\ 1&1&1&0&0&0&0\\ 0&1&1&1&0&1&1 \end{pmatrix}$ | 360 |
| $4F$ | $\begin{pmatrix} 1&1&0&1&0&0&0\\ 0&1&1&0&0&1&0\\ 1&0&1&0&1&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&1&0&1&0\\ 1&0&0&1&0&1&0\\ 0&0&0&1&1&0&1 \end{pmatrix}$ | 720 | $4G$ | $\begin{pmatrix} 0&0&1&0&0&0&0\\ 0&1&0&0&1&1&0\\ 1&1&0&0&0&1&0\\ 1&1&1&0&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&1&1&0&1&0\\ 0&0&0&1&1&0&1 \end{pmatrix}$ | 720 |

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Table 8.1 : The Conjugacy classes of $2^5 : S_6$(continued)

| $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ | $[q]_{2^5:S_6}$ | Class representative | $\lvert[q]_{2^5:S_6}\rvert$ |
|---|---|---|---|---|---|
| $4H$ | $\begin{pmatrix} 1&0&1&1&1&1&0\\ 0&0&1&1&1&0&0\\ 1&1&0&1&1&1&0\\ 0&1&1&0&1&0&0\\ 0&0&0&1&1&1&0\\ 1&1&0&1&0&0&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 720 | $4I$ | $\begin{pmatrix} 1&1&0&1&0&0&0\\ 1&0&1&0&1&0&0\\ 0&1&0&0&1&1&0\\ 1&1&1&1&1&0&0\\ 1&0&0&0&1&1&0\\ 1&0&1&1&1&1&0\\ 0&1&1&0&1&1&1 \end{pmatrix}$ | 720 |
| $4J$ | $\begin{pmatrix} 0&1&1&0&0&1&0\\ 1&1&0&1&0&0&0\\ 0&0&0&1&1&1&0\\ 1&1&1&1&0&1&0\\ 0&1&1&1&1&1&0\\ 1&1&0&1&1&1&0\\ 1&0&1&0&1&1&1 \end{pmatrix}$ | 720 | $5A$ | $\begin{pmatrix} 1&1&0&0&1&0&0\\ 0&0&1&0&1&1&0\\ 0&1&0&1&0&1&0\\ 1&1&0&0&0&1&0\\ 0&0&0&1&0&0&0\\ 1&0&0&1&1&0&0\\ 0&1&0&0&1&0&1 \end{pmatrix}$ | 2304 |
| $6A$ | $\begin{pmatrix} 1&1&0&0&1&0&0\\ 1&0&0&0&0&0&0\\ 0&1&1&1&0&1&0\\ 0&1&0&1&1&0&0\\ 1&1&1&1&0&1&0\\ 0&1&1&1&0&0&0\\ 0&0&0&0&0&0&1 \end{pmatrix}$ | 160 | $6B$ | $\begin{pmatrix} 0&0&0&1&0&0&0\\ 0&1&0&1&1&0&0\\ 0&1&0&0&1&1&0\\ 1&0&0&0&0&0&0\\ 1&1&0&1&0&0&0\\ 1&0&1&0&1&0&0\\ 0&0&1&0&0&1&1 \end{pmatrix}$ | 480 |
| $6C$ | $\begin{pmatrix} 0&1&1&0&1&0&0\\ 0&0&1&0&0&0&0\\ 1&1&0&0&1&0&0\\ 0&0&0&0&0&1&0\\ 0&1&0&1&0&1&0\\ 0&0&1&0&1&1&0\\ 0&1&0&1&1&1&1 \end{pmatrix}$ | 480 | $6D$ | $\begin{pmatrix} 0&0&1&1&1&0&0\\ 0&1&0&1&1&0&0\\ 0&0&0&0&0&1&0\\ 1&0&0&0&0&0&0\\ 0&1&1&0&1&0&0\\ 0&1&1&1&0&0&0\\ 0&1&1&0&1&1&1 \end{pmatrix}$ | 640 |
| $6E$ | $\begin{pmatrix} 0&0&1&1&0&1&0\\ 0&1&0&0&0&0&0\\ 1&0&0&1&0&1&0\\ 0&0&0&0&0&1&0\\ 0&1&1&1&1&1&0\\ 0&1&1&0&0&1&0\\ 0&1&1&1&0&1&1 \end{pmatrix}$ | 960 | $6F$ | $\begin{pmatrix} 0&1&1&1&1&1&0\\ 1&1&1&1&0&1&0\\ 1&1&0&1&1&1&0\\ 0&1&0&0&1&1&0\\ 0&0&1&1&0&1&0\\ 1&1&0&1&0&0&0\\ 1&1&0&0&0&0&1 \end{pmatrix}$ | 960 |
| $6G$ | $\begin{pmatrix} 0&1&0&1&1&0&0\\ 0&0&0&0&1&1&0\\ 0&0&1&1&1&0&0\\ 0&0&1&0&1&1&0\\ 1&1&1&0&0&0&0\\ 0&1&0&1&0&1&0\\ 1&1&0&0&0&0&1 \end{pmatrix}$ | 1920 | $6H$ | $\begin{pmatrix} 1&0&1&0&0&1&0\\ 1&1&1&1&1&0&0\\ 1&1&0&0&0&1&0\\ 1&1&0&1&0&0&0\\ 0&0&0&1&1&1&0\\ 1&0&1&0&1&0&0\\ 1&1&0&0&0&0&1 \end{pmatrix}$ | 1920 |
| $8A$ | $\begin{pmatrix} 0&1&0&1&0&1&0\\ 1&1&1&0&0&0&0\\ 0&0&1&0&1&1&0\\ 0&0&1&1&1&0&0\\ 1&0&1&1&0&0&0\\ 1&1&1&0&1&1&0\\ 1&0&0&1&1&1&1 \end{pmatrix}$ | 1440 | $8B$ | $\begin{pmatrix} 1&1&1&1&0&1&0\\ 0&1&1&1&0&0&0\\ 0&1&1&0&1&0&0\\ 1&1&0&1&1&1&0\\ 0&1&0&1&0&1&0\\ 1&0&0&1&1&0&0\\ 0&1&0&0&1&0&1 \end{pmatrix}$ | 1440 |
| $10A$ | $\begin{pmatrix} 0&0&1&1&0&1&0\\ 1&1&0&1&0&0&0\\ 1&0&1&0&1&0&0\\ 0&0&1&1&1&0&0\\ 1&1&1&0&1&1&0\\ 0&1&1&0&0&1&0\\ 0&1&0&0&1&0&1 \end{pmatrix}$ | 2304 | $12A$ | $\begin{pmatrix} 1&0&1&0&0&1&0\\ 1&1&0&1&0&0&0\\ 1&1&1&1&1&0&0\\ 0&1&1&0&1&0&0\\ 1&1&1&0&1&1&0\\ 1&1&1&1&0&1&0\\ 0&0&0&1&1&0&1 \end{pmatrix}$ | 960 |
| $12B$ | $\begin{pmatrix} 1&1&1&0&1&1&0\\ 0&1&1&0&0&1&0\\ 1&0&1&1&0&0&0\\ 0&0&1&0&0&0&0\\ 1&0&1&0&0&1&0\\ 0&1&0&0&0&0&0\\ 1&0&1&0&1&1&1 \end{pmatrix}$ | 960 | | | |

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$2^5 : S_6$ has 37 conjugacy classes and under the action of $2^5 : S_6$ on $2^7$ we obtained eight orbits of lenghts 1,1,12,16,16,20,30 and 32. The point stabilizers for the orbits are $2^5 : S_6$ , $2^5 : S_6$,$2^4 : S_5$, $S_6 \times 2$,$S_6 \times 2$,$(S_4 \times S_4) : 2$, $(2^2 \times 2^2).S_4$ and $S_6$ of indices 1,1,12,16,16,20,30 and 32, respectively ,in $2^5 : S_6$. Note that the point stabilizers for the orbits of length 16 are not the same. We used Programme A and the help of the Gap team at Aachen to compute the orbit lengths and the structures of the point stabilizers. Let $\chi(2^5 : S_6|2^7)$ be the permutation character of $2^5 : S_6$ on $2^7$. We also let $\chi(2^5 : S_6|2^4 : S_5)$, $\chi(2^5 : S_6|S_6 \times 2)$, $\chi(2^5 : S_6|S_6 \times 2)$, $\chi(2^5 : S_6|(S_4 \times S_4) : 2)$, $\chi(2^5 : S_6|(2^2 \times 2^2).S_4)$ and $\chi(2^5 : S_6|S_6)$ be the permutation characters of $2^5 : S_6$ on $2^4 : S_5$, $S_6 \times 2$,$S_6 \times 2$, $(S_4 \times S_4) : 2$, $(2^2 \times 2^2).S_4$ and $S_6$, respectively . The permutation characters $\chi(2^5 : S_6|2^4 : S_5) = 1a + 5b + 6b$, $\chi(2^5 : S_6|S_6 \times 2) = 1a + 15b$, $\chi(2^5 : S_6|S_6 \times 2) = 1a + 15b$, $\chi(2^5 : S_6|(S_4 \times S_4) : 2) = 1a + 9a + 10f$, $\chi(2^5 : S_6|(2^2 \times 2^2).S_4) = 1a + 5b + 9a + 15b$ and $\chi(2^5 : S_6|S_6) = 1a + 6b + 10f + 15b$ are written in terms of the irreducible characters of $2^5 : S_6$. These calculations were done through the help of the program Magma.

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We obtain that
$\chi(2^5 : S_6|2^7) = I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^5:S_6} + I^{2^5:S_6}_{2^4:S_5} + I^{2^5:S_6}_{S_6\times 2} + I^{2^5:S_6}_{S_6\times 2} + I^{2^5:S_6}_{(S_4\times S_4):2} + I^{2^5:S_6}_{(2^2\times 2^2).S_4} + I^{2^5:S_6}_{S_6}$,
which are the sum of the identity characters of the point stabilizers induced to $2^5 : S_6$. We note that $\chi(2^5 : S_6|2^4 : S_5) = I^{2^5:S_6}_{2^4:S_5}$, $\chi(2^5 : S_6|S_6 \times 2) = I^{2^5:S_6}_{S_6\times 2}$,
$\chi(2^5 : S_6|S_6 \times 2) = I^{2^5:S_6}_{S_6\times 2}$, $\chi(2^5 : S_6|S_4 \times S_4) : 2) = I^{2^5:S_6}_{(S_4\times S_4):2}$,
$\chi(2^5 : S_6|(2^2 \times 2^2).S_4) = I^{2^5:S_6}_{(2^2\times 2^2).S_4}$ and $\chi(2^5 : S_6|S_6) = I^{2^5:S_6}_{S_6}$ .
Therefore $\chi(2^5 : S_6|2^7) = 8 \times 1a + 2 \times 5b + 2 \times 6b + 2 \times 9a + 2 \times 10f + 4 \times 15b$

The values of $\chi(2^5 : S_6|2^7)$ on the different classes of $2^5 : S_6$ determine the number $l$ of fixed points of each $q \in 2^5 : S_6$ in $2^7$. Hence this values of the $l$'s will enable us to calculate the conjugacy classes of $2^7 : (2^5 : S_6)$. These values of $l$'s are listed in Table 8.2.

Table 8.2: The values of $\chi(2^5 : S_6|2^7)$ on the different classes of $2^5 : S_6$

| $[q]_{2^5:S_6}$ | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $2I$ | $2J$ | $3A$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^4 : S_5)$ | 12 | 0 | 8 | 4 | 0 | 8 | 0 | 0 | 4 | 0 | 4 | 6 |
| $\chi(2^5 : S_6\|S_6 \times 2)$ | 16 | 16 | 0 | 0 | 8 | 8 | 4 | 4 | 0 | 4 | 4 | 4 |
| $\chi(2^5 : S_6\|S_6 \times 2)$ | 16 | 16 | 0 | 0 | 8 | 8 | 4 | 4 | 0 | 4 | 4 | 4 |
| $\chi(2^5 : S_6\|(S_4 \times S_4) : 2)$ | 20 | 0 | 8 | 12 | 0 | 8 | 0 | 8 | 4 | 0 | 4 | 2 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 30 | 30 | 14 | 14 | 14 | 14 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi(2^5 : S_6\|S_6)$ | 32 | 0 | 0 | 0 | 0 | 16 | 0 | 8 | 0 | 0 | 8 | 8 |
| $l$ | 128 | 64 | 32 | 32 | 32 | 64 | 16 | 32 | 16 | 16 | 32 | 32 |

| $[q]_{2^5:S_6}$ | $3B$ | $4A$ | $4B$ | $4C$ | $4D$ | $4E$ | $4F$ | $4G$ | $4H$ | $4I$ | $4J$ | $5A$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^4 : S_5)$ | 0 | 2 | 6 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 4 | 2 |
| $\chi(2^5 : S_6\|S_6 \times 2)$ | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 1 |
| $\chi(2^5 : S_6\|S_6 \times 2)$ | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 2 | 1 |
| $\chi(2^5 : S_6\|(S_4 \times S_4) : 2)$ | 2 | 6 | 2 | 4 | 0 | 4 | 0 | 2 | 0 | 4 | 0 | 0 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 0 | 6 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| $\chi(2^5 : S_6\|S_6)$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 |
| $l$ | 8 | 16 | 16 | 8 | 8 | 8 | 8 | 8 | 8 | 16 | 16 | 8 |

| $[q]_{2^5:S_6}$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ | $6G$ | $6H$ | $8A$ | $8B$ | $10A$ | $12A$ | $12B$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^5 : S_6)$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi(2^5 : S_6\|2^4 : S_5)$ | 0 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| $\chi(2^5 : S_6\|S_6 \times 2)$ | 4 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| $\chi(2^5 : S_6\|S_6 \times 2)$ | 4 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| $\chi(2^5 : S_6\|(S_4 \times S_4) : 2)$ | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| $\chi(2^5 : S_6\|(2^2 \times 2^2).S_4)$ | 6 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi(2^5 : S_6\|S_6)$ | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| $l$ | 16 | 8 | 8 | 4 | 16 | 8 | 4 | 8 | 4 | 4 | 4 | 4 | 4 |

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These values of $l$ enabled us to determine the number $f_j$ of orbits $Q_i$'s , $1 \leq i \leq l$ which have fused together under the action of $C_{2^5:S_6}(q)$ ,for each class representative $q \in 2^5 : S_6$ , to form one orbit $\triangle_f$. We obtain that $2^7 : (2^5 : S_6)$ has exactly 274 conjugacy classes of elements after the calculations of the $f_j$'s. These values

of the $f_j$'s together with the lengths of each class $[g]_{2^7:(2^5:S_6)}$ and its corresponding centralizer $C_{2^7:(2^5:S_6)}(g)$ are listed in Table 8.3. We also list the $d_j$'s and the orders of each class representative $d_j q \in G$. See Section 7.1.1 how these calculations are performed. Table 8.3 contains all the relevant information regarding the conjugacy classes of $2^7 : (2^5 : S_6)$.

Table 8.3: The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$

| $[q]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $1A$ | 128 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $1A$ | 1 | 2949120 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(1,1,1,1,1,1,0)$ | $2A$ | 1 | 2949120 |
| | | $f_3 = 12$ | $(1,0,0,0,0,0,1)$ | $(1,0,0,0,0,0,1)$ | $2B$ | 12 | 245760 |
| | | $f_4 = 16$ | $(0,0,0,0,0,0,1)$ | $(0,0,0,0,0,0,1)$ | $2C$ | 16 | 184320 |
| | | $f_5 = 16$ | $(1,1,1,1,1,1,1)$ | $(1,1,1,1,1,1,1)$ | $2D$ | 16 | 184320 |
| | | $f_6 = 20$ | $(0,0,0,1,0,0,1)$ | $(0,0,0,1,0,0,1)$ | $2E$ | 20 | 147456 |
| | | $f_7 = 30$ | $(1,1,0,1,1,0,0)$ | $(1,1,0,1,1,0,0)$ | $2F$ | 30 | 98304 |
| | | $f_8 = 32$ | $(1,1,0,0,1,0,0)$ | $(1,1,0,0,1,0,0)$ | $2G$ | 32 | 92160 |
| $2A$ | 64 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2H$ | 2 | 1474560 |
| | | $f_2 = 6$ | $(1,0,0,0,0,0,1)$ | $(1,1,1,1,1,1,0)$ | $4A$ | 12 | 245760 |
| | | $f_3 = 10$ | $(0,0,0,1,0,0,1)$ | $(1,1,1,1,1,1,0)$ | $4B$ | 20 | 147456 |
| | | $f_4 = 15$ | $(1,1,0,1,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $2I$ | 30 | 98304 |
| | | $f_5 = 16$ | $(1,1,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $4C$ | 32 | 92160 |
| | | $f_6 = 16$ | $(0,0,0,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $2J$ | 32 | 92160 |
| $2B$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2K$ | 60 | 49152 |
| | | $f_2 = 1$ | $(1,0,0,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $2L$ | 60 | 49152 |
| | | $f_3 = 3$ | $(1,1,0,0,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2M$ | 180 | 16384 |
| | | $f_4 = 3$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2N$ | 180 | 16384 |
| | | $f_5 = 4$ | $(0,0,0,1,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $4D$ | 240 | 12288 |
| | | $f_6 = 4$ | $(1,1,1,1,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $4E$ | 240 | 12288 |
| | | $f_7 = 8$ | $(1,1,0,0,1,0,0)$ | $(0,1,0,0,1,0,0)$ | $4F$ | 480 | 6144 |
| | | $f_8 = 8$ | $(1,1,1,1,1,1,1)$ | $(0,1,0,0,1,0,0)$ | $4G$ | 480 | 6144 |
| $2C$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2O$ | 60 | 49152 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $4H$ | 60 | 49152 |
| | | $f_3 = 3$ | $(1,1,0,0,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2P$ | 180 | 16384 |
| | | $f_4 = 3$ | $(1,1,1,0,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $4I$ | 180 | 16384 |
| | | $f_5 = 4$ | $(1,0,0,1,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $4J$ | 240 | 12288 |
| | | $f_6 = 4$ | $(0,1,1,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2Q$ | 240 | 12288 |
| | | $f_7 = 8$ | $(1,1,0,0,1,0,0)$ | $(1,0,0,0,0,1,0)$ | $4K$ | 480 | 6144 |
| | | $f_8 = 8$ | $(1,1,1,1,1,1,1)$ | $(1,0,0,0,0,1,0)$ | $4L$ | 480 | 6144 |
| $2D$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2R$ | 120 | 24576 |
| | | $f_2 = 1$ | $(0,0,1,1,1,0,1)$ | $(1,0,1,0,0,0,0)$ | $4M$ | 120 | 24576 |
| | | $f_3 = 3$ | $(1,1,1,0,1,1,1)$ | $(1,0,1,0,0,0,0)$ | $4N$ | 360 | 8192 |
| | | $f_4 = 3$ | $(1,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $2S$ | 360 | 8192 |
| | | $f_5 = 4$ | $(0,0,0,1,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $4O$ | 480 | 6144 |
| | | $f_6 = 4$ | $(0,0,0,0,1,0,0)$ | $(1,0,1,0,0,0,0)$ | $4P$ | 480 | 6144 |
| | | $f_7 = 4$ | $(0,0,0,1,1,0,0)$ | $(0,1,0,1,1,1,0)$ | $4Q$ | 480 | 6144 |
| | | $f_8 = 4$ | $(1,1,1,1,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $4R$ | 480 | 6144 |
| | | $f_9 = 4$ | $(0,1,1,0,0,0,1)$ | $(0,1,0,1,1,1,0)$ | $4S$ | 480 | 6144 |
| | | $f_{10} = 4$ | $(0,0,0,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2T$ | 480 | 6144 |
| $2E$ | 64 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2U$ | 60 | 49152 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2V$ | 60 | 49152 |
| | | $f_3 = 2$ | $(0,0,1,1,1,0,1)$ | $(1,0,1,0,0,0,0)$ | $4T$ | 120 | 24576 |
| | | $f_4 = 4$ | $(0,0,0,1,1,0,1)$ | $(1,0,1,0,0,0,0)$ | $4U$ | 240 | 12288 |
| | | $f_5 = 4$ | $(0,0,1,1,0,0,1)$ | $(1,0,1,0,0,0,0)$ | $4V$ | 240 | 12288 |
| | | $f_6 = 6$ | $(1,1,1,0,1,1,1)$ | $(1,0,1,0,0,0,0)$ | $4W$ | 360 | 8192 |
| | | $f_7 = 6$ | $(1,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $2W$ | 360 | 8192 |
| | | $f_8 = 8$ | $(0,0,0,1,0,0,0)$ | $(1,0,1,0,0,0,0)$ | $4X$ | 480 | 6144 |
| | | $f_9 = 8$ | $(0,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $2X$ | 480 | 6144 |
| | | $f_{10} = 8$ | $(0,0,0,1,1,0,0)$ | $(1,0,1,0,0,0,0)$ | $4Y$ | 480 | 6144 |
| | | $f_{11} = 8$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2Y$ | 480 | 6144 |
| | | $f_{12} = 8$ | $(0,1,1,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $2Z$ | 480 | 6144 |

Table 8.3 : The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$ (continued)

| $[q]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $2F$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AA$ | 480 | 6144 |
| | | $f_2 = 1$ | $(0,0,0,1,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $4Z$ | 480 | 6144 |
| | | $f_3 = 1$ | $(0,0,0,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AB$ | 480 | 6144 |
| | | $f_4 = 1$ | $(1,1,0,1,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $4AA$ | 480 | 6144 |
| | | $f_5 = 3$ | $(0,0,0,0,1,0,0)$ | $(0,1,1,0,1,1,0)$ | $4AB$ | 1440 | 2048 |
| | | $f_6 = 3$ | $(0,0,0,1,1,0,0)$ | $(1,0,0,1,0,0,0)$ | $4AC$ | 1440 | 2048 |
| | | $f_7 = 3$ | $(1,1,1,0,1,1,1)$ | $(0,0,1,1,1,1,0)$ | $4AD$ | 1440 | 2048 |
| | | $f_8 = 3$ | $(1,1,1,1,1,1,1)$ | $(1,1,0,0,0,0,0)$ | $4AE$ | 1440 | 2048 |
| $2G$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AC$ | 240 | 12288 |
| | | $f_2 = 1$ | $(1,0,1,0,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $2AD$ | 240 | 12288 |
| | | $f_3 = 1$ | $(0,0,0,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AE$ | 240 | 12288 |
| | | $f_4 = 1$ | $(0,0,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $2AF$ | 240 | 12288 |
| | | $f_5 = 2$ | $(0,0,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AG$ | 480 | 6144 |
| | | $f_6 = 2$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AH$ | 480 | 6144 |
| | | $f_7 = 6$ | $(0,0,0,0,1,0,0)$ | $(1,0,0,1,0,0,0)$ | $4AF$ | 1440 | 2048 |
| | | $f_8 = 6$ | $(0,0,0,1,1,0,0)$ | $(1,0,0,1,0,0,0)$ | $4AG$ | 1440 | 2048 |
| | | $f_9 = 6$ | $(1,1,1,0,1,1,1)$ | $(1,1,0,0,0,0,0)$ | $4AH$ | 1440 | 2048 |
| | | $f_{10} = 6$ | $(0,0,0,0,0,0,1)$ | $(1,1,0,0,0,0,0)$ | $4AI$ | 1440 | 2048 |
| $2H$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AI$ | 1440 | 2048 |
| | | $f_2 = 1$ | $(1,0,1,0,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $4AJ$ | 1440 | 2048 |
| | | $f_3 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,1,0,1,0,0,0)$ | $4AK$ | 1440 | 2048 |
| | | $f_4 = 1$ | $(1,1,0,1,0,1,0)$ | $(1,0,1,0,1,1,0)$ | $4AL$ | 1440 | 2048 |
| | | $f_5 = 1$ | $(1,0,0,0,1,1,0)$ | $(0,1,0,1,0,0,0)$ | $4AM$ | 1440 | 2048 |
| | | $f_6 = 1$ | $(0,1,0,0,0,1,1)$ | $(1,0,1,0,1,1,0)$ | $4AN$ | 1440 | 2048 |
| | | $f_7 = 1$ | $(0,1,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2AJ$ | 1440 | 2048 |
| | | $f_8 = 1$ | $(0,1,1,0,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $4AO$ | 1440 | 2048 |
| | | $f_9 = 2$ | $(0,0,0,1,0,0,0)$ | $(0,1,0,0,0,1,0)$ | $4AP$ | 2880 | 1024 |
| | | $f_{10} = 2$ | $(0,0,0,1,1,0,0)$ | $(1,0,1,1,1,0,0)$ | $4AQ$ | 2880 | 1024 |
| | | $f_{11} = 2$ | $(1,0,1,1,1,1,1)$ | $(1,1,1,0,1,0,0)$ | $4AR$ | 2880 | 1024 |
| | | $f_{12} = 2$ | $(0,0,1,1,0,0,1)$ | $(1,0,1,1,1,0,0)$ | $4AS$ | 2880 | 1024 |
| $2I$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AK$ | 1440 | 2048 |
| | | $f_2 = 1$ | $(1,0,1,1,1,0,0)$ | $(1,0,1,0,0,0,0)$ | $4AT$ | 1440 | 2048 |
| | | $f_3 = 1$ | $(1,1,1,0,1,1,1)$ | $(1,0,1,0,0,0,0)$ | $4AU$ | 1440 | 2048 |
| | | $f_4 = 1$ | $(1,1,0,0,1,1,0)$ | $(0,1,0,1,1,1,0)$ | $4AV$ | 1440 | 2048 |
| | | $f_5 = 1$ | $(1,1,0,1,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $4AW$ | 1440 | 2048 |
| | | $f_6 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AL$ | 1440 | 2048 |
| | | $f_7 = 1$ | $(0,1,1,1,0,0,1)$ | $(0,1,0,1,1,1,0)$ | $4AX$ | 1440 | 2048 |
| | | $f_8 = 1$ | $(1,0,0,0,0,0,1)$ | $(1,1,1,1,1,1,0)$ | $4AY$ | 1440 | 2048 |
| | | $f_9 = 2$ | $(0,0,0,1,0,0,0)$ | $(1,0,1,1,0,1,0)$ | $4AZ$ | 2880 | 1024 |
| | | $f_{10} = 2$ | $(0,0,0,0,1,0,0)$ | $(0,0,0,1,0,1,0)$ | $4BA$ | 2880 | 1024 |
| | | $f_{11} = 2$ | $(0,0,1,1,0,0,1)$ | $(0,1,0,0,1,0,0)$ | $4BB$ | 2880 | 1024 |
| | | $f_{12} = 2$ | $(0,1,0,0,1,0,1)$ | $(0,0,0,1,0,1,0)$ | $4BC$ | 2880 | 1024 |
| $2J$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AM$ | 720 | 4096 |
| | | $f_2 = 1$ | $(0,0,0,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $2AN$ | 720 | 4096 |
| | | $f_3 = 1$ | $(0,0,1,1,0,0,1)$ | $(0,1,0,1,0,0,0)$ | $4BD$ | 720 | 4096 |
| | | $f_4 = 1$ | $(0,0,1,0,0,1,1)$ | $(0,1,0,1,0,0,0)$ | $4BE$ | 720 | 4096 |
| | | $f_5 = 2$ | $(0,0,0,1,0,0,0)$ | $(0,1,0,1,0,0,0)$ | $4BF$ | 1440 | 2048 |
| | | $f_6 = 2$ | $(1,1,1,1,0,1,1)$ | $(0,1,0,1,0,0,0)$ | $4BG$ | 1440 | 2048 |
| | | $f_7 = 2$ | $(1,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $2AO$ | 1440 | 2048 |
| | | $f_8 = 2$ | $(1,1,0,1,0,1,0)$ | $(0,1,0,1,0,0,0)$ | $4BH$ | 1440 | 2048 |
| | | $f_9 = 2$ | $(0,1,0,0,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $2AP$ | 1440 | 2048 |
| | | $f_{10} = 2$ | $(0,0,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $2AQ$ | 1440 | 2048 |
| | | $f_{11} = 4$ | $(0,0,0,0,1,0,0)$ | $(1,1,1,0,1,0,0)$ | $4BI$ | 2880 | 1024 |
| | | $f_{12} = 4$ | $(0,0,0,1,1,0,0)$ | $(1,0,1,1,1,0,0)$ | $4BJ$ | 2880 | 1024 |
| | | $f_{13} = 4$ | $(0,1,0,0,0,1,1)$ | $(1,0,1,1,1,0,0)$ | $4BK$ | 2880 | 1024 |
| | | $f_{14} = 4$ | $(1,0,1,1,1,1,1)$ | $(1,1,1,0,1,0,0)$ | $4BL$ | 2880 | 1024 |
| $3A$ | 32 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3A$ | 640 | 4608 |
| | | $f_2 = 1$ | $(1,0,1,1,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $6A$ | 640 | 4608 |
| | | $f_3 = 2$ | $(1,0,1,1,1,1,1)$ | $(1,1,1,1,0,1,1)$ | $6B$ | 1280 | 2304 |
| | | $f_4 = 4$ | $(1,1,1,1,1,1,1)$ | $(0,1,1,1,0,1,1)$ | $6C$ | 2560 | 1152 |
| | | $f_5 = 4$ | $(0,0,0,0,0,0,1)$ | $(1,0,0,0,1,0,1)$ | $6D$ | 2560 | 1152 |
| | | $f_6 = 6$ | $(0,0,0,1,1,0,0)$ | $(1,0,0,1,0,0,0)$ | $6E$ | 3840 | 768 |
| | | $f_7 = 6$ | $(0,0,0,1,0,0,1)$ | $(1,0,0,1,1,0,1)$ | $6F$ | 3840 | 768 |
| | | $f_8 = 8$ | $(0,0,0,0,1,0,0)$ | $(1,0,0,0,0,0,0)$ | $6G$ | 5120 | 576 |
| $3B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $3B$ | 10240 | 288 |
| | | $f_2 = 1$ | $(1,0,0,0,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $6H$ | 10240 | 288 |
| | | $f_3 = 1$ | $(1,0,1,1,0,1,1)$ | $(0,1,0,0,0,1,1)$ | $6I$ | 10240 | 288 |
| | | $f_4 = 1$ | $(0,1,1,1,0,1,1)$ | $(1,0,1,1,1,0,1)$ | $6J$ | 10240 | 288 |
| | | $f_5 = 2$ | $(1,0,1,1,0,0,0)$ | $(0,1,0,1,0,1,0)$ | $6K$ | 20480 | 144 |
| | | $f_6 = 2$ | $(0,0,0,0,1,0,1)$ | $(1,1,1,0,1,1,1)$ | $6L$ | 20480 | 144 |
| $4A$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BM$ | 960 | 3072 |
| | | $f_2 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BN$ | 960 | 3072 |
| | | $f_3 = 3$ | $(1,1,1,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BO$ | 2880 | 1024 |
| | | $f_4 = 3$ | $(1,0,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BP$ | 2880 | 1024 |
| | | $f_5 = 4$ | $(1,1,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $8A$ | 3840 | 768 |
| | | $f_6 = 4$ | $(1,1,1,1,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $8B$ | 3840 | 768 |

Table 8.3 : The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$ (continued)

| $[q]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $4B$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BMQ$ | 960 | 3072 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BR$ | 960 | 3072 |
| | | $f_3 = 3$ | $(1,0,1,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4BS$ | 2880 | 1024 |
| | | $f_4 = 3$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BT$ | 2880 | 1024 |
| | | $f_5 = 4$ | $(0,0,0,0,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $8C$ | 3840 | 768 |
| | | $f_6 = 4$ | $(1,0,0,1,0,0,1)$ | $(1,1,1,1,1,1,0)$ | $8D$ | 3840 | 768 |
| $4C$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BU$ | 2880 | 1024 |
| | | $f_2 = 1$ | $(1,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BV$ | 2880 | 1024 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BW$ | 2880 | 1024 |
| | | $f_4 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4BX$ | 2880 | 1024 |
| | | $f_5 = 2$ | $(0,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4BY$ | 5760 | 512 |
| | | $f_6 = 2$ | $(1,0,0,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4BZ$ | 5760 | 512 |
| $4D$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CA$ | 2880 | 1024 |
| | | $f_2 = 1$ | $(1,0,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CB$ | 2880 | 1024 |
| | | $f_3 = 1$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CC$ | 2880 | 1024 |
| | | $f_4 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CD$ | 2880 | 1024 |
| | | $f_5 = 2$ | $(0,0,0,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CE$ | 5760 | 512 |
| | | $f_6 = 2$ | $(1,0,0,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CF$ | 5760 | 512 |
| $4E$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CG$ | 5760 | 512 |
| | | $f_2 = 1$ | $(0,0,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CH$ | 5760 | 512 |
| | | $f_3 = 1$ | $(0,0,0,0,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CI$ | 5760 | 512 |
| | | $f_4 = 1$ | $(0,0,0,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CJ$ | 5760 | 512 |
| | | $f_5 = 1$ | $(1,1,1,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CK$ | 5760 | 512 |
| | | $f_6 = 1$ | $(0,0,0,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CL$ | 5760 | 512 |
| | | $f_7 = 1$ | $(0,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CM$ | 5760 | 512 |
| | | $f_8 = 1$ | $(0,0,1,0,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CN$ | 5760 | 512 |
| $4F$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CO$ | 11520 | 256 |
| | | $f_2 = 1$ | $(0,0,0,0,1,0,0)$ | $(0,1,1,0,1,1,0)$ | $8E$ | 11520 | 256 |
| | | $f_3 = 1$ | $(1,1,1,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CP$ | 11520 | 256 |
| | | $f_4 = 1$ | $(0,0,0,1,0,1,0)$ | $(0,1,1,0,1,1,0)$ | $8F$ | 11520 | 256 |
| | | $f_5 = 1$ | $(1,0,1,1,1,1,1)$ | $(0,1,1,0,1,1,0)$ | $8G$ | 11520 | 256 |
| | | $f_6 = 1$ | $(0,0,1,1,0,0,1)$ | $(0,1,1,0,1,1,0)$ | $8H$ | 11520 | 256 |
| | | $f_7 = 1$ | $(1,1,0,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CQ$ | 11520 | 256 |
| | | $f_8 = 1$ | $(0,1,0,0,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CR$ | 11520 | 256 |
| $4G$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CS$ | 11520 | 256 |
| | | $f_2 = 1$ | $(0,0,0,1,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $8I$ | 11520 | 256 |
| | | $f_3 = 1$ | $(0,1,0,0,1,0,1)$ | $(1,1,1,1,1,1,0)$ | $8J$ | 11520 | 256 |
| | | $f_4 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CT$ | 11520 | 256 |
| | | $f_5 = 1$ | $(1,0,0,0,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $8K$ | 11520 | 256 |
| | | $f_6 = 1$ | $(0,1,1,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CU$ | 11520 | 256 |
| | | $f_7 = 1$ | $(0,0,1,1,0,0,1)$ | $(1,1,1,1,1,1,0)$ | $8L$ | 11520 | 256 |
| | | $f_8 = 1$ | $(1,1,0,1,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CV$ | 11520 | 256 |
| $4H$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4CW$ | 11520 | 256 |
| | | $f_2 = 1$ | $(0,0,0,1,0,0,0)$ | $(1,0,1,0,1,1,0)$ | $8M$ | 11520 | 256 |
| | | $f_3 = 1$ | $(1,0,1,0,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4CX$ | 11520 | 256 |
| | | $f_4 = 1$ | $(0,0,0,1,1,0,0)$ | $(1,0,1,0,1,1,0)$ | $8N$ | 11520 | 256 |
| | | $f_5 = 1$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4CY$ | 11520 | 256 |
| | | $f_6 = 1$ | $(0,0,1,0,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4CZ$ | 11520 | 256 |
| | | $f_7 = 1$ | $(1,0,1,1,1,1,1)$ | $(1,0,1,0,1,1,0)$ | $8O$ | 11520 | 256 |
| | | $f_8 = 1$ | $(0,1,1,1,0,1,1)$ | $(1,0,1,0,1,1,0)$ | $8P$ | 11520 | 256 |
| $4I$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4DA$ | 5760 | 512 |
| | | $f_2 = 1$ | $(0,0,1,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $4DB$ | 5760 | 512 |
| | | $f_3 = 1$ | $(0,1,1,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4DC$ | 5760 | 512 |
| | | $f_4 = 1$ | $(0,0,1,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4DD$ | 5760 | 512 |
| | | $f_5 = 2$ | $(0,0,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4DE$ | 11520 | 256 |
| | | $f_6 = 2$ | $(0,0,0,0,1,0,0)$ | $(0,1,0,1,0,0,0)$ | $8Q$ | 11520 | 256 |
| | | $f_7 = 2$ | $(0,0,0,1,1,0,0)$ | $(0,1,0,1,0,0,0)$ | $8R$ | 11520 | 256 |
| | | $f_8 = 2$ | $(1,1,1,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $4DF$ | 11520 | 256 |
| | | $f_9 = 2$ | $(0,1,0,0,0,1,1)$ | $(0,1,0,1,0,0,0)$ | $8S$ | 11520 | 256 |
| | | $f_{10} = 2$ | $(1,0,1,1,1,1,1)$ | $(0,1,0,1,0,0,0)$ | $8T$ | 11520 | 256 |
| $4J$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $4DG$ | 5760 | 512 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $4DH$ | 5760 | 512 |
| | | $f_3 = 1$ | $(0,0,0,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $4DI$ | 5760 | 512 |
| | | $f_4 = 1$ | $(1,1,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $4DJ$ | 5760 | 512 |
| | | $f_5 = 2$ | $(1,0,1,0,0,1,0)$ | $(0,0,0,0,0,0,0)$ | $4DK$ | 11520 | 256 |
| | | $f_6 = 2$ | $(0,0,0,0,0,1,0)$ | $(1,0,0,1,0,0,0)$ | $8U$ | 11520 | 256 |
| | | $f_7 = 2$ | $(0,0,0,1,0,1,0)$ | $(1,0,0,1,0,0,0)$ | $8V$ | 11520 | 256 |
| | | $f_8 = 2$ | $(1,1,1,0,1,1,1)$ | $(1,0,0,1,0,0,0)$ | $8W$ | 11520 | 256 |
| | | $f_9 = 2$ | $(0,0,1,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $4DL$ | 11520 | 256 |
| | | $f_{10} = 2$ | $(1,0,1,0,1,1,1)$ | $(1,0,0,1,0,0,0)$ | $8X$ | 11520 | 256 |
| $5A$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $5A$ | 36864 | 80 |
| | | $f_2 = 1$ | $(0,1,1,0,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $10A$ | 36864 | 80 |
| | | $f_3 = 1$ | $(0,1,0,0,1,0,1)$ | $(1,1,1,0,1,0,1)$ | $10B$ | 36864 | 80 |
| | | $f_4 = 1$ | $(0,1,0,0,0,1,1)$ | $(0,0,0,1,0,1,1)$ | $10C$ | 36864 | 80 |
| | | $f_5 = 2$ | $(1,1,0,0,0,1,0)$ | $(1,0,0,1,0,1,0)$ | $10D$ | 73728 | 40 |
| | | $f_6 = 2$ | $(1,1,1,0,1,1,1)$ | $(1,0,0,0,0,0,1)$ | $10E$ | 73728 | 40 |

Table 8.3 : The conjugacy classes of elements of $G = 2^7 : (2^5 : S_6)$ (continued)

| $[q]_{2^5:S_6}$ | $l$ | $f_j$ | $d_j$ | $w$ | $[g]_{2^7:(2^5:S_6)}$ | $\lvert[g]_{2^7:(2^5:S_6)}\rvert$ | $C_{2^7:(2^5:S_6)}(g)$ |
|---|---|---|---|---|---|---|---|
| $6A$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6M$ | 1280 | 2304 |
| | | $f_2 = 1$ | $(1,1,1,1,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $12A$ | 1280 | 2304 |
| | | $f_3 = 3$ | $(1,0,0,1,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6N$ | 3840 | 768 |
| | | $f_4 = 3$ | $(0,1,1,0,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $12B$ | 38400 | 768 |
| | | $f_5 = 4$ | $(0,1,1,0,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $12C$ | 5120 | 576 |
| | | $f_6 = 4$ | $(0,0,1,1,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $6O$ | 5120 | 576 |
| $6B$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6P$ | 7680 | 384 |
| | | $f_2 = 1$ | $(1,1,1,0,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $12D$ | 7680 | 384 |
| | | $f_3 = 1$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Q$ | 7680 | 384 |
| | | $f_4 = 1$ | $(0,1,0,0,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $12E$ | 7680 | 384 |
| | | $f_5 = 2$ | $(0,0,0,0,1,0,0)$ | $(1,0,0,1,0,0,0)$ | $12F$ | 15360 | 192 |
| | | $f_6 = 2$ | $(1,1,1,1,1,1,1)$ | $(0,1,1,0,1,1,0)$ | $12G$ | 15360 | 192 |
| $6C$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6R$ | 7680 | 384 |
| | | $f_2 = 1$ | $(1,0,0,1,0,0,0)$ | $(1,1,1,1,1,1,0)$ | $12H$ | 7680 | 384 |
| | | $f_3 = 1$ | $(0,0,1,1,1,0,1)$ | $(1,1,1,1,1,1,0)$ | $12I$ | 7680 | 384 |
| | | $f_4 = 1$ | $(0,1,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6S$ | 7680 | 384 |
| | | $f_5 = 2$ | $(0,0,0,1,0,0,0)$ | $(1,0,1,0,0,0,0)$ | $12J$ | 15360 | 192 |
| | | $f_6 = 2$ | $(1,0,0,0,1,0,1)$ | $(0,1,0,1,1,1,0)$ | $12K$ | 15360 | 192 |
| $6D$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6T$ | 20480 | 144 |
| | | $f_2 = 1$ | $(1,1,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $12L$ | 20480 | 144 |
| | | $f_3 = 1$ | $(0,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6U$ | 20480 | 144 |
| | | $f_4 = 1$ | $(1,0,0,1,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $12M$ | 20480 | 144 |
| $6E$ | 16 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6V$ | 7680 | 384 |
| | | $f_2 = 1$ | $(0,0,1,1,0,0,1)$ | $(1,0,1,0,0,0,0)$ | $12N$ | 7680 | 384 |
| | | $f_3 = 1$ | $(0,1,0,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6W$ | 7680 | 384 |
| | | $f_4 = 1$ | $(0,0,0,1,1,0,1)$ | $(1,0,1,0,0,0,0)$ | $12O$ | 7680 | 384 |
| | | $f_5 = 2$ | $(0,0,0,1,0,0,0)$ | $(1,0,1,0,0,0,0)$ | $12P$ | 15360 | 192 |
| | | $f_6 = 2$ | $(0,1,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6X$ | 15360 | 192 |
| | | $f_7 = 2$ | $(0,1,0,0,0,1,0)$ | $(1,0,1,0,0,0,0)$ | $12Q$ | 15360 | 192 |
| | | $f_8 = 2$ | $(1,1,1,0,1,1,1)$ | $(1,0,1,0,0,0,0)$ | $12R$ | 15360 | 192 |
| | | $f_9 = 2$ | $(1,1,0,0,0,0,1)$ | $(0,0,0,0,0,0,0)$ | $6Y$ | 15360 | 192 |
| | | $f_{10} = 2$ | $(1,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6Z$ | 15360 | 192 |
| $6F$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AA$ | 15360 | 192 |
| | | $f_2 = 1$ | $(0,0,0,1,0,0,0)$ | $(0,1,0,1,1,1,0)$ | $12S$ | 15360 | 192 |
| | | $f_3 = 1$ | $(0,0,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $12T$ | 15360 | 192 |
| | | $f_4 = 1$ | $(0,0,0,1,0,0,1)$ | $(0,1,0,1,1,1,0)$ | $12U$ | 15360 | 192 |
| | | $f_5 = 1$ | $(0,0,0,1,1,0,0)$ | $(1,0,1,0,0,0,0)$ | $12V$ | 15360 | 192 |
| | | $f_6 = 1$ | $(1,0,0,0,0,0,1)$ | $(1,1,1,1,1,1,0)$ | $12W$ | 15360 | 192 |
| | | $f_7 = 1$ | $(1,1,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AB$ | 15360 | 192 |
| | | $f_8 = 1$ | $(1,0,0,1,0,0,1)$ | $(1,0,1,0,0,0,0)$ | $12X$ | 15360 | 192 |
| $6G$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AC$ | 61440 | 48 |
| | | $f_2 = 1$ | $(0,1,1,0,0,1,0)$ | $(1,1,1,1,1,1,0)$ | $12Y$ | 61440 | 48 |
| | | $f_3 = 1$ | $(1,0,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AD$ | 61440 | 48 |
| | | $f_4 = 1$ | $(1,1,0,0,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $12Z$ | 61440 | 48 |
| $6H$ | 8 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AE$ | 30720 | 96 |
| | | $f_2 = 1$ | $(1,1,1,1,1,1,0)$ | $(0,0,0,0,0,0,0)$ | $6AF$ | 30720 | 96 |
| | | $f_3 = 1$ | $(0,0,0,1,1,0,1)$ | $(0,0,0,0,0,0,0)$ | $6AG$ | 30720 | 96 |
| | | $f_4 = 1$ | $(0,1,0,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AH$ | 30720 | 96 |
| | | $f_5 = 2$ | $(1,0,0,1,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $6AI$ | 61440 | 48 |
| | | $f_6 = 2$ | $(0,0,0,0,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $6AJ$ | 61440 | 48 |
| $8A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $8Y$ | 46080 | 64 |
| | | $f_2 = 1$ | $(1,1,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $8Z$ | 46080 | 64 |
| | | $f_3 = 1$ | $(0,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8AA$ | 46080 | 64 |
| | | $f_4 = 1$ | $(1,0,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $8AB$ | 46080 | 64 |
| $8B$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $8AC$ | 46080 | 64 |
| | | $f_2 = 1$ | $(1,1,0,0,1,0,0)$ | $(0,0,0,0,0,0,0)$ | $8AD$ | 46080 | 64 |
| | | $f_3 = 1$ | $(0,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $8AE$ | 46080 | 64 |
| | | $f_4 = 1$ | $(1,0,0,1,0,1,1)$ | $(0,0,0,0,0,0,0)$ | $8AF$ | 46080 | 64 |
| $10A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $10F$ | 73728 | 40 |
| | | $f_2 = 1$ | $(1,1,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $20A$ | 73728 | 40 |
| | | $f_3 = 1$ | $(0,0,1,1,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $10G$ | 73728 | 40 |
| | | $f_4 = 1$ | $(1,0,0,1,0,1,1)$ | $(1,1,1,1,1,1,0)$ | $20B$ | 73728 | 40 |
| $12A$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12AA$ | 30720 | 96 |
| | | $f_2 = 1$ | $(1,1,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $24A$ | 30720 | 96 |
| | | $f_3 = 2$ | $(0,0,1,1,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $24B$ | 30720 | 96 |
| | | $f_4 = 1$ | $(1,0,0,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12AB$ | 30720 | 96 |
| $12B$ | 4 | $f_1 = 1$ | $(0,0,0,0,0,0,0)$ | $(0,0,0,0,0,0,0)$ | $12AC$ | 30720 | 96 |
| | | $f_2 = 1$ | $(1,1,0,0,1,0,0)$ | $(1,1,1,1,1,1,0)$ | $24C$ | 30720 | 96 |
| | | $f_3 = 2$ | $(0,0,1,1,1,1,1)$ | $(1,1,1,1,1,1,0)$ | $24D$ | 30720 | 96 |
| | | $f_4 = 1$ | $(1,0,0,0,1,1,1)$ | $(0,0,0,0,0,0,0)$ | $12AD$ | 30720 | 96 |

## 8.3 The Inertia groups of $2^7 : (2^5 : S_6)$

The action of $2^5 : S_6$ on the conjugacy classes of $2^7$ determine 8 orbits being formed, with respective lenghts of$1, 1, 12, 16, 16, 20, 30$ and 32. Therefore by Brauer's Theorem $2^5 : S_6$ acting on $Irr(2^7)$ will also form 8 orbits of lenghts 1, $r_1$, $r_2$, $r_3$, $r_4$, $r_5$, $r_6$and $r_7$ such that $r_1 + r_2 + r_3 + r_4 + r_5 + r_6 + r_7 = 127$. There are eight inertia groups $H_i = 2^7 : \bar{H}_i$, $i$ = 1,2,...,8, where the $\bar{H}_i$'s are the inertia factor groups of the inertia groups , which are maximal subgroups or sit in the maximal subgroups of $2^5 : S_6$.

Now the sum of the number of conjugacy classes of these inertia factors must be in total equal to 274 , that is, the number of the conjugacy classes of $2^7 : (2^5 : S_6)$. By constructing all maximal subgroups of $2^5 : S_6$ in Magma and taken into account the above facts , we conclude that $r_1 = r_2 = r_3 = r_4 = 1$ , $r_5 = r_6 = 30$ and $r_7 = 32$. We obtain that $\bar{H}_1 = \bar{H}_2 = \bar{H}_3 = \bar{H}_4 = 2^5 : S_6$, $\bar{H}_5 = \bar{H}_6 = (2^2 \times 2^2).S_4$, $\bar{H}_7 = \bar{H}_8 = S_6$. We also made use of Programme A and the help of the Gap team at Aachen to determine the structures of the inertia factor groups. The inertia factor groups, the $\bar{H}_i$'s, are constructed from elements within $2^5 : S_6$ and the generators are as follows.

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- $\langle \zeta_1, \zeta_2, \zeta_3 \rangle = (2^2 \times 2^2).S_4$, $\zeta_1 \in 2E$ ,$\zeta_2 \in 2F$,$\zeta_3 \in 4F$ where

$$\zeta_1 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 1&0&1&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&0&1&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}, \quad \zeta_2 = \begin{pmatrix} 0&1&1&1&1&1&0\\ 1&0&1&1&1&1&0\\ 0&0&0&1&1&1&0\\ 1&1&1&0&1&1&0\\ 0&1&1&0&0&1&0\\ 1&0&1&0&1&0&0\\ 1&1&0&0&0&0&1 \end{pmatrix}, \quad \zeta_3 = \begin{pmatrix} 0&0&1&0&0&0&0\\ 1&1&1&0&0&0&0\\ 0&1&0&0&1&1&0\\ 0&1&0&0&0&0&0\\ 0&0&0&0&0&1&0\\ 0&0&1&1&0&1&0\\ 0&1&0&1&1&1&1 \end{pmatrix}$$

- $\langle \eta_1, \eta_2, \eta_3 \rangle = S_6$, $\eta_1 \in 2E$ ,$\eta_2 \in 2G$,$\eta_3 \in 4J$ where

$$\eta_1 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 0&0&1&0&0&0&0\\ 1&0&1&1&0&0&0\\ 0&0&0&0&1&0&0\\ 1&0&1&0&0&1&0\\ 0&0&0&0&0&0&1 \end{pmatrix}, \quad \eta_2 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&0&0&0&0\\ 1&1&1&0&0&0&0\\ 0&0&0&1&0&0&0\\ 1&0&0&1&1&0&0\\ 0&1&0&1&0&1&0\\ 1&1&0&0&0&0&1 \end{pmatrix}, \quad \eta_3 = \begin{pmatrix} 1&0&0&0&0&0&0\\ 0&1&0&1&1&0&0\\ 1&1&0&0&1&0&0\\ 1&0&1&0&1&0&0\\ 1&1&1&1&1&0&0\\ 1&0&1&1&1&1&0\\ 0&0&0&1&1&0&1 \end{pmatrix}$$

### 8.3.1 The fusions of the inertia factor groups into $2^5 : S_6$

We obtain the fusions of the inertia factors $\bar{H}_i$'s, $i = 3, 4, ..., 8$ , into $2^5 : S_6$ by using direct matrix conjugation in $2^5 : S_6$ and the permutation characters of the inertia factor groups in $2^5 : S_6$ of degrees 30 and 32 respectively. MAGMA was used for the various computations. These fusion maps of the inertia factor groups into $2^5 : S_6$ are shown in the tables below.

Table 8.4: The fusion of $(2^2 \times 2^2).S_4$ into $2^5 : S_6$

| $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{(2^2\times 2^2).S_4}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $1A$ | | $1A$ | $2M$ | | $2J$ | $2Z$ | | $2H$ | $4K$ | | $4H$ |
| $2A$ | | $2D$ | $2N$ | | $2I$ | $2AA$ | | $2J$ | $4L$ | | $4G$ |
| $2B$ | | $2C$ | $2O$ | | $2F$ | $3A$ | | $3A$ | $4M$ | | $4B$ |
| $2C$ | | $2A$ | $2P$ | | $2G$ | $4A$ | | $4D$ | $4N$ | | $4J$ |
| $2D$ | | $2B$ | $2Q$ | | $2H$ | $4B$ | | $4E$ | $4O$ | | $4I$ |
| $2E$ | | $2D$ | $2R$ | | $2F$ | $4C$ | | $4C$ | $4P$ | | $4J$ |
| $2F$ | | $2E$ | $2S$ | | $2J$ | $4D$ | | $4E$ | $6A$ | | $6E$ |
| $2G$ | | $2E$ | $2T$ | | $2I$ | $4E$ | | $4H$ | $6B$ | | $6F$ |
| $2H$ | | $2H$ | $2U$ | | $2J$ | $4F$ | | $4I$ | $6C$ | | $6C$ |
| $2I$ | | $2C$ | $2V$ | | $2I$ | $4G$ | | $4A$ | $6D$ | | $6E$ |
| $2J$ | | $2I$ | $2W$ | | $2D$ | $4H$ | | $4G$ | $6E$ | | $6B$ |
| $2K$ | | $2B$ | $2X$ | | $2E$ | $4I$ | | $4F$ | $6F$ | | $6F$ |
| $2L$ | | $2G$ | $2Y$ | | $2H$ | $4J$ | | $4F$ | $6G$ | | $6A$ |

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Table 8.5: The fusion of $S_6$ into $2^5 : S_6$

| $[\bar{h}]_{S_6}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ | $[\bar{h}]_{S_6}$ | $\longrightarrow$ | $[q]_{2^5:S_6}$ |
|---|---|---|---|---|---|---|---|---|
| $1A$ | | $1A$ | $3A$ | | $3A$ | $5A$ | | $5A$ |
| $2A$ | | $2E$ | $3B$ | | $3B$ | $6A$ | | $6H$ |
| $2B$ | | $2G$ | $4A$ | | $4I$ | $6B$ | | $6E$ |
| $2C$ | | $2J$ | $4B$ | | $4J$ | | | |

## 8.4 The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$

The Fischer-Clifford matrices of $2^7 : (2^5 : S_6)$ were constructed by using the properties of Fischer-Clifford matrices which are given in Chapter5 together with the fusions maps of the inertia factor groups into $2^5 : S_6$. Note each conjugacy class $[q]$ of $2^5 : S_6$ with representative $q \in 2^5 : S_6$ corresponds to a Fischer-Clifford matrix

$M(q)$ of $2^7 : (2^5 : S_6)$ . See the example in Section 7.1.4 for the detailed calculations of Fischer-Clifford matrices for a split extension group.

Table 8.6: The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$

$M(q)$

$$M(1A)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 30 & 30 & 10 & 0 & 0 & -6 & -2 & 0 \\ 30 & 30 & -10 & 0 & 0 & 6 & -2 & 0 \\ 32 & -32 & 0 & 8 & -8 & 0 & 0 & 0 \\ 32 & -32 & 0 & -8 & 8 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2A)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 \\ 30 & 10 & -6 & -2 & 0 & 0 \\ 30 & -10 & 6 & -2 & 0 & 0 \end{pmatrix}$$

$$M(2B)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 2 & -2 & 2 & -2 & -2 & 2 & 0 & 0 \\ 12 & 12 & -4 & -4 & 0 & 0 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 \\ 12 & -12 & -4 & 4 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2C)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 2 & -2 & 2 & -2 & -2 & 2 & 0 & 0 \\ 12 & 12 & -4 & -4 & 0 & 0 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 \\ 12 & -12 & -4 & 4 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2D)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 12 & 12 & -4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 12 & -12 & 4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2E)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & 1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 \\ 1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 & 1 \\ 12 & 12 & 12 & 0 & 0 & -4 & -4 & 0 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & 1 & 1 & -1 & -1 \\ 12 & 12 & -12 & 0 & 0 & 4 & -4 & 0 & 0 & 0 & 0 & 0 \\ 16 & -16 & 0 & 8 & -8 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 16 & -16 & 0 & -8 & 8 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2F)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\ 3 & 3 & -3 & -3 & -1 & -1 & 1 & 1 \\ 3 & -3 & 3 & -3 & 1 & -1 & -1 & 1 \\ 3 & -3 & -3 & 3 & 1 & -1 & 1 & -1 \\ 3 & 3 & 3 & 3 & -1 & -1 & -1 & -1 \end{pmatrix}$$

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Table 8.6 : The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$(continued)

$M(q)$

$$M(2G)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 3 & 3 & 3 & 3 & -3 & -3 & -1 & -1 & 1 & 1 \\ 3 & 3 & -3 & -3 & 3 & -3 & 1 & -1 & -1 & 1 \\ 3 & 3 & 3 & 3 & 3 & 3 & -1 & -1 & -1 & -1 \\ 3 & 3 & -3 & -3 & -3 & 3 & 1 & -1 & 1 & -1 \\ 8 & -8 & 8 & -8 & 0 & 0 & 0 & 0 & 0 & 0 \\ 8 & -8 & -8 & 8 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2H)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & -1 & 1 & -1 \\ 1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 2 & -2 & 2 & -2 & 2 & -2 & 2 & -2 & 0 & 0 & 0 & 0 \\ 2 & 2 & 2 & -2 & -2 & 2 & -2 & -2 & 0 & 0 & 0 & 0 \\ 1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 2 & 2 & -2 & 2 & -2 & -2 & 2 & -2 & 0 & 0 & 0 & 0 \\ 2 & -2 & -2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2I)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & 1 & -1 \\ 1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 2 & -2 & 2 & -2 & 2 & 2 & -2 & -2 & 0 & 0 & 0 & 0 \\ 2 & 2 & 2 & -2 & -2 & -2 & 2 & -2 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 & 1 & -1 & -1 \\ 2 & -2 & -2 & 2 & 2 & -2 & 2 & -2 & 0 & 0 & 0 & 0 \\ 2 & 2 & -2 & 2 & -2 & 2 & -2 & -2 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(2J)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & -1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & 1 & -1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 2 & 2 & -2 & -2 & -2 & -2 & 2 & -2 & 2 & 2 & 0 & 0 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & -2 & -2 & 2 & -2 & 2 & 0 & 0 & 0 & 0 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 \\ 2 & 2 & -2 & -2 & -2 & 2 & 2 & 2 & -2 & -2 & 0 & 0 & 0 & 0 \\ 2 & 2 & 2 & 2 & -2 & 2 & -2 & -2 & 2 & -2 & 0 & 0 & 0 & 0 \\ 8 & -8 & 8 & -8 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 8 & -8 & -8 & 8 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$M(3A)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 & -1 & 1 \\ 6 & 6 & 6 & 0 & 0 & -2 & -2 & 0 \\ 6 & 6 & -6 & 0 & 0 & -2 & 2 & 0 \\ 8 & -8 & 0 & -4 & 4 & 0 & 0 & 0 \\ 8 & -8 & 0 & 4 & -4 & 0 & 0 & 0 \end{pmatrix}$$

$$M(3B)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$$

$$M(4A)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 6 & 6 & -2 & -2 & 0 & 0 \\ 6 & -6 & -2 & 2 & 0 & 0 \end{pmatrix}$$

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Table 8.6 : The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$(continued)

| $M(q)$ | $M(q)$ |
|---|---|
| $M(4B)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 6 & 6 & -2 & -2 & 0 & 0 \\ 6 & -6 & -2 & 2 & 0 & 0 \end{pmatrix}$ | $M(4C)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(4D)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ | $M(4E)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & -1 & 1 & -1 & -1 & -1 & 1 & 1 \\ 1 & 1 & -1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(4F)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & -1 & 1 & -1 & -1 & -1 & 1 & 1 \end{pmatrix}$ | $M(4G)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \end{pmatrix}$ |
| $M(4H)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & -1 & -1 & 1 & -1 & -1 \\ 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 \\ 1 & -1 & 1 & -1 & -1 & -1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \\ 1 & 1 & -1 & 1 & -1 & -1 & -1 & 1 \\ 1 & -1 & -1 & -1 & 1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 \end{pmatrix}$ | $M(4I)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 \\ 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 \\ 1 & 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \\ 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$ |
| $M(5A)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & 2 & -2 & 0 & 0 \\ 2 & -2 & -2 & 2 & 0 & 0 \end{pmatrix}$ | $M(4J)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & 1 & -1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 \\ 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \\ 4 & -4 & 4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$ |
| $M(6A)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 \\ 6 & 6 & -2 & -2 & 0 & 0 \\ 6 & -6 & -2 & 2 & 0 & 0 \end{pmatrix}$ | $M(6B)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & -1 & 1 \\ 2 & 2 & -2 & -2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ |
| $M(6C)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ | $M(6D)=\begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(6F)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 \\ 1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & 1 & -1 & -1 & -1 & 1 \end{pmatrix}$ | $M(6E)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 & 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & 1 & -1 & -1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & 1 & -1 \\ 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 4 & -4 & -4 & 4 & 0 & 0 & 0 & 0 & 0 & 0 \\ 4 & 4 & -4 & -4 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$ |
| $M(6G)=\begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(6H)=\begin{pmatrix} 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 \\ 1 & 1 & -1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 & 1 & -1 \\ 2 & -2 & -2 & 2 & 0 & 0 \\ 2 & -2 & 2 & -2 & 0 & 0 \end{pmatrix}$ |

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Table 8.6 : The Fischer-Clifford Matrices of $2^7 : (2^5 : S_6)$(continued)

| $M(g)$ | $M(g)$ |
|---|---|
| $M(8A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & 1 & -1 & -1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \end{pmatrix}$ | $M(8B) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(10A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | $M(12A) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ |
| $M(12B) = \begin{pmatrix} 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 \\ 1 & -1 & -1 & 1 \\ 1 & 1 & -1 & -1 \end{pmatrix}$ | |

## 8.5 Character Table of $2^7 : (2^5 : S_6)$

The character table of $G = 2^7 : (2^5 : S_6)$ was constructed through the above Fischer-Clifford Matrices and the character tables of the 8 inertia factors groups together with their respective fusions maps into $2^5 : S_6$. We partitioned the set of irreducible characters of $G = 2^7 : (2^5 : S_6)$ into 6 blocks $B_1$, $B_2$, $B_3$, $B_4$, $B_5$, $B_6$, $B_7$ and $B_8$ corresponding to the inertia factor groups $\bar{H}_1$, $\bar{H}_2$, $\bar{H}_3$, $\bar{H}_4$, $\bar{H}_5$, $\bar{H}_6$, $\bar{H}_7$ and $\bar{H}_8$, respectively. Therefore $Irr(G = 2^7 : (2^5 : S_6)) = \bigcup_{i=1}^{8} B_i$, where $B_1 = \{\chi_j | 1 \leq j \leq 37\}$, $B_2 = \{\chi_j | 38 \leq j \leq 74\}$, $B_3 = \{\chi_j | 75 \leq j \leq 111\}$, $B_4 = \{\chi_j | 112 \leq j \leq 148\}$, $B_5 = \{\chi_j | 149 \leq j \leq 200\}$, $B_6 = \{\chi_j | 201 \leq j \leq 252\}$, $B_7 = \{\chi_j | 253 \leq j \leq 263\}$ and $B_8 = \{\chi_j | 264 \leq j \leq 274\}$. The complete character table is given in Table 8.7.

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Table 8.7: charactertable of $2^7 : (2^5 : S_6)$

| | $1A$ | | | | | | | | $2A$ | | | | | | $2B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $4A$ | $4B$ | $2I$ | $4C$ | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_4$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_5$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_6$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_7$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | -6 | -6 | -6 | -6 | -6 | -6 | -2 | -2 | -2 | -2 |
| $\chi_8$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | -6 | -6 | -6 | -6 | -6 | -6 | -2 | -2 | -2 | -2 |
| $\chi_9$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{10}$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{11}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 |
| $\chi_{12}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 |
| $\chi_{14}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | -10 | 2 | 2 | 2 | 2 |
| $\chi_{15}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{16}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| $\chi_{17}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| $\chi_{22}$ | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | -20 | -20 | -20 | -20 | -20 | -20 | 4 | 4 | 4 | 4 |
| $\chi_{23}$ | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | -24 | -24 | -24 | -24 | -24 | -24 | -8 | -8 | -8 | -8 |
| $\chi_{24}$ | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | -24 | -24 | -24 | -24 | -24 | -24 | -8 | -8 | -8 | -8 |
| $\chi_{25}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | -30 | -30 | -30 | -30 | -10 | -10 | -10 | -10 |
| $\chi_{26}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -30 | -30 | -30 | -30 | -30 | -30 | -10 | -10 | -10 | -10 |
| $\chi_{27}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -2 | -2 | -2 | -2 |
| $\chi_{28}$ | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | -2 | -2 | -2 | -2 |
| $\chi_{29}$ | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | -36 | -36 | -36 | -36 | -36 | -36 | -12 | -12 | -12 | -12 |
| $\chi_{30}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 |
| $\chi_{31}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 |
| $\chi_{32}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 |
| $\chi_{33}$ | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | -40 | 8 | 8 | 8 | 8 |
| $\chi_{34}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 |
| $\chi_{35}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 |
| $\chi_{36}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | -3 | -3 | -3 | -3 |
| $\chi_{38}$ | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{39}$ | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{40}$ | 5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{41}$ | 5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{42}$ | 5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{43}$ | 5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 | 5 | -5 |
| $\chi_{44}$ | 6 | 6 | -6 | 6 | 6 | -6 | 6 | -6 | -6 | 6 | 6 | -6 | 6 | -6 | -2 | 2 | -2 | 2 |
| $\chi_{45}$ | 6 | 6 | -6 | 6 | 6 | -6 | 6 | -6 | -6 | 6 | 6 | -6 | 6 | -6 | -2 | 2 | -2 | 2 |
| $\chi_{46}$ | 9 | 9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -9 | -9 | 9 | -9 | 9 | 9 | -9 | 9 | -9 |
| $\chi_{47}$ | 9 | 9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -9 | -9 | 9 | -9 | 9 | 9 | -9 | 9 | -9 |
| $\chi_{48}$ | 10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{49}$ | 10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{50}$ | 10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{51}$ | 10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 2 | -2 | 2 | -2 |
| $\chi_{52}$ | 10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{53}$ | 10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 |
| $\chi_{54}$ | 15 | 15 | -15 | 15 | 15 | -15 | 15 | -15 | 15 | -15 | -15 | 15 | -15 | 15 | -1 | 1 | -1 | 1 |
| $\chi_{55}$ | 15 | 15 | -15 | 15 | 15 | -15 | 15 | -15 | 15 | -15 | -15 | 15 | -15 | 15 | -1 | 1 | -1 | 1 |
| $\chi_{56}$ | 15 | 15 | -15 | 15 | 15 | -15 | 15 | -15 | 15 | -15 | -15 | 15 | -15 | 15 | -1 | 1 | -1 | 1 |
| $\chi_{57}$ | 15 | 15 | -15 | 15 | 15 | -15 | 15 | -15 | 15 | -15 | -15 | 15 | -15 | 15 | -1 | 1 | -1 | 1 |
| $\chi_{58}$ | 16 | 16 | -16 | 16 | 16 | -16 | 16 | -16 | 16 | -16 | -16 | 16 | -16 | 16 | 16 | -16 | 16 | -16 |
| $\chi_{59}$ | 20 | 20 | -20 | 20 | 20 | -20 | 20 | -20 | -20 | 20 | 20 | -20 | 20 | -20 | 4 | -4 | 4 | -4 |
| $\chi_{60}$ | 24 | 24 | -24 | 24 | 24 | -24 | 24 | -24 | -24 | 24 | 24 | -24 | 24 | -24 | -8 | 8 | -8 | 8 |
| $\chi_{61}$ | 24 | 24 | -24 | 24 | 24 | -24 | 24 | -24 | -24 | 24 | 24 | -24 | 24 | -24 | -8 | 8 | -8 | 8 |
| $\chi_{62}$ | 30 | 30 | -30 | 30 | 30 | -30 | 30 | -30 | -30 | 30 | 30 | -30 | 30 | -30 | -10 | 10 | -10 | 10 |
| $\chi_{63}$ | 30 | 30 | -30 | 30 | 30 | -30 | 30 | -30 | -30 | 30 | 30 | -30 | 30 | -30 | -10 | 10 | -10 | 10 |
| $\chi_{64}$ | 30 | 30 | -30 | 30 | 30 | -30 | 30 | -30 | 30 | -30 | -30 | 30 | -30 | 30 | -2 | 2 | -2 | 2 |
| $\chi_{65}$ | 30 | 30 | -30 | 30 | 30 | -30 | 30 | -30 | 30 | -30 | -30 | 30 | -30 | 30 | -2 | 2 | -2 | 2 |
| $\chi_{66}$ | 36 | 36 | -36 | 36 | 36 | -36 | 36 | -36 | -36 | 36 | 36 | -36 | 36 | -36 | -12 | 12 | -12 | 12 |
| $\chi_{67}$ | 40 | 40 | -40 | 40 | 40 | -40 | 40 | -40 | -40 | 40 | 40 | -40 | 40 | -40 | 8 | -8 | 8 | -8 |
| $\chi_{68}$ | 40 | 40 | -40 | 40 | 40 | -40 | 40 | -40 | -40 | 40 | 40 | -40 | 40 | -40 | 8 | -8 | 8 | -8 |
| $\chi_{69}$ | 40 | 40 | -40 | 40 | 40 | -40 | 40 | -40 | -40 | 40 | 40 | -40 | 40 | -40 | 8 | -8 | 8 | -8 |
| $\chi_{70}$ | 40 | 40 | -40 | 40 | 40 | -40 | 40 | -40 | -40 | 40 | 40 | -40 | 40 | -40 | 8 | -8 | 8 | -8 |
| $\chi_{71}$ | 45 | 45 | -45 | 45 | 45 | -45 | 45 | -45 | 45 | -45 | -45 | 45 | -45 | 45 | -3 | 3 | -3 | 3 |
| $\chi_{72}$ | 45 | 45 | -45 | 45 | 45 | -45 | 45 | -45 | 45 | -45 | -45 | 45 | -45 | 45 | -3 | 3 | -3 | 3 |
| $\chi_{73}$ | 45 | 45 | -45 | 45 | 45 | -45 | 45 | -45 | 45 | -45 | -45 | 45 | -45 | 45 | -3 | 3 | -3 | 3 |
| $\chi_{74}$ | 45 | 45 | -45 | 45 | 45 | -45 | 45 | -45 | 45 | -45 | -45 | 45 | -45 | 45 | -3 | 3 | -3 | 3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2B$ | | | | $2C$ | | | | | | | | $2D$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4D$ | $4E$ | $4F$ | $4G$ | $2O$ | $4H$ | $2P$ | $4I$ | $4J$ | $2Q$ | $4K$ | $4L$ | $2R$ | $4M$ | $4N$ | $2S$ | $4O$ | $4P$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_4$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_5$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_8$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_9$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{12}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{13}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{14}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{15}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -5 | -5 | -5 | -5 | -5 | -5 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 5 | 5 | 5 | 5 | 5 | 5 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -7 | -7 | -7 | -7 | -7 | -7 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 7 | 7 | 7 | 7 | 7 | 7 |
| $\chi_{21}$ | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{24}$ | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{25}$ | -10 | -10 | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{26}$ | -10 | -10 | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{27}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{28}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{29}$ | -12 | -12 | -12 | -12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{31}$ | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{32}$ | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 9 | 9 | 9 | 9 | 9 | 9 |
| $\chi_{35}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -9 | -9 | -9 | -9 | -9 | -9 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{38}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{39}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{40}$ | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{41}$ | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{42}$ | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{43}$ | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 5 | -5 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{44}$ | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{45}$ | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{46}$ | 9 | -9 | 9 | -9 | 9 | -9 | 9 | -9 | 9 | -9 | 9 | -9 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{47}$ | 9 | -9 | 9 | -9 | 9 | -9 | 9 | -9 | 9 | -9 | 9 | -9 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{48}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{49}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{50}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{51}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{52}$ | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{53}$ | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{54}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -5 | 5 | 5 | -5 | -5 | 5 |
| $\chi_{55}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 5 | -5 | -5 | 5 | 5 | -5 |
| $\chi_{56}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -7 | 7 | 7 | -7 | -7 | 7 |
| $\chi_{57}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 7 | -7 | -7 | 7 | 7 | -7 |
| $\chi_{58}$ | 16 | -16 | 16 | -16 | 16 | -16 | 16 | -16 | 16 | -16 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | -8 | 8 | -8 | 8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 |
| $\chi_{61}$ | -8 | 8 | -8 | 8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 | -8 | 8 |
| $\chi_{62}$ | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{63}$ | -10 | 10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{64}$ | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{65}$ | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{66}$ | -12 | 12 | -12 | 12 | 12 | -12 | 12 | -12 | 12 | -12 | 12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 8 | -8 | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | -8 | 8 |
| $\chi_{68}$ | 8 | -8 | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | -8 | 8 | 8 | -8 |
| $\chi_{69}$ | 8 | -8 | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 8 | -8 | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 9 | -9 | -9 | 9 | 9 | -9 |
| $\chi_{72}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -9 | 9 | 9 | -9 | -9 | 9 |
| $\chi_{73}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{74}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2D$ | | | | $2E$ | | | | | | | | | | | | $2F$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4Q$ | $4R$ | $4S$ | $2T$ | $2U$ | $2V$ | $4T$ | $4U$ | $4V$ | $4W$ | $2W$ | $4X$ | $2X$ | $4Y$ | $2Y$ | $2Z$ | $2AA$ | $4Z$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_4$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 |
| $\chi_7$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 |
| $\chi_8$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{12}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{13}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{14}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{16}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{17}$ | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | 3 | 3 |
| $\chi_{18}$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | -3 | -3 |
| $\chi_{19}$ | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -3 | -3 |
| $\chi_{20}$ | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 3 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 |
| $\chi_{24}$ | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 |
| $\chi_{25}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 |
| $\chi_{26}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 |
| $\chi_{28}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -6 | -6 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 0 |
| $\chi_{31}$ | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 |
| $\chi_{34}$ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | -3 | -3 |
| $\chi_{35}$ | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | 3 | 3 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{38}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{39}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{40}$ | 3 | 3 | -3 | -3 | -3 | -3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | 1 | -1 |
| $\chi_{41}$ | -3 | -3 | 3 | 3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | -1 | 1 |
| $\chi_{42}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 3 | -3 |
| $\chi_{43}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -3 | 3 |
| $\chi_{44}$ | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 | 4 | 4 | 4 | -4 | -4 | -4 | 0 | 0 |
| $\chi_{45}$ | -4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | -4 | -4 | -4 | 4 | 4 | 4 | 0 | 0 |
| $\chi_{46}$ | 3 | 3 | -3 | -3 | -3 | -3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 |
| $\chi_{47}$ | -3 | -3 | 3 | 3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 |
| $\chi_{48}$ | -4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 |
| $\chi_{49}$ | -4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | -4 | -4 | -4 | 4 | 4 | 4 | -4 | 4 |
| $\chi_{50}$ | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 | 4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 |
| $\chi_{51}$ | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 |
| $\chi_{52}$ | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{53}$ | -2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{54}$ | 5 | 5 | -5 | -5 | -5 | -5 | 5 | -5 | -5 | 5 | -5 | -5 | -5 | 5 | 5 | 5 | 3 | -3 |
| $\chi_{55}$ | -5 | -5 | 5 | 5 | 5 | 5 | -5 | 5 | 5 | -5 | 5 | 5 | 5 | -5 | -5 | -5 | -3 | 3 |
| $\chi_{56}$ | 7 | 7 | -7 | -7 | -7 | -7 | 7 | -7 | -7 | 7 | -7 | -7 | -7 | 7 | 7 | 7 | -3 | 3 |
| $\chi_{57}$ | -7 | -7 | 7 | 7 | 7 | 7 | -7 | 7 | 7 | -7 | 7 | 7 | 7 | -7 | -7 | -7 | 3 | -3 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | -8 | -8 | 8 | 8 | -8 | -8 | 8 | -8 | -8 | 8 | -8 | -8 | -8 | 8 | 8 | 8 | 0 | 0 |
| $\chi_{61}$ | 8 | 8 | -8 | -8 | 8 | 8 | -8 | 8 | 8 | -8 | 8 | 8 | 8 | -8 | -8 | -8 | 0 | 0 |
| $\chi_{62}$ | 4 | 4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 | 4 | 4 | 4 | -4 | -4 | -4 | 0 | 0 |
| $\chi_{63}$ | -4 | -4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | -4 | -4 | -4 | 4 | 4 | 4 | 0 | 0 |
| $\chi_{64}$ | -2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 6 | -6 |
| $\chi_{65}$ | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -6 | 6 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 8 | 8 | -8 | -8 | 8 | 8 | -8 | 8 | 8 | -8 | 8 | 8 | 8 | -8 | -8 | -8 | 0 | 0 |
| $\chi_{68}$ | -8 | -8 | 8 | 8 | -8 | -8 | 8 | -8 | -8 | 8 | -8 | -8 | -8 | 8 | 8 | 8 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 |
| $\chi_{71}$ | -9 | -9 | 9 | 9 | 9 | 9 | -9 | 9 | 9 | -9 | 9 | 9 | 9 | -9 | -9 | -9 | -3 | 3 |
| $\chi_{72}$ | 9 | 9 | -9 | -9 | -9 | -9 | 9 | -9 | -9 | 9 | -9 | -9 | -9 | 9 | 9 | 9 | 3 | -3 |
| $\chi_{73}$ | 3 | 3 | -3 | -3 | -3 | -3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 |
| $\chi_{74}$ | -3 | -3 | 3 | 3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2F$ | | | | | | $2G$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AB$ | $4AA$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $2AG$ | $2AH$ | $4AF$ | $4AG$ | $4AH$ | $4AI$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_6$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{12}$ | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{13}$ | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{14}$ | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{15}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{18}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{19}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{20}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| $\chi_{28}$ | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 |
| $\chi_{33}$ | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{35}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{38}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{40}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{41}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{42}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{43}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{47}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{48}$ | 4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 |
| $\chi_{49}$ | -4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | -4 |
| $\chi_{50}$ | 4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 |
| $\chi_{51}$ | -4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | -4 | -4 |
| $\chi_{52}$ | 2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{53}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{54}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{55}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{56}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{57}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 6 | -6 | -6 | 6 | 6 | -6 | 6 | 6 | 6 | 6 | -6 | -6 | 6 | 6 | -6 | -6 |
| $\chi_{65}$ | -6 | 6 | 6 | -6 | -6 | 6 | -6 | -6 | -6 | -6 | 6 | 6 | -6 | -6 | 6 | 6 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 8 | -8 | -8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | -8 | 8 | 8 |
| $\chi_{70}$ | -8 | 8 | 8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | 8 | -8 | -8 |
| $\chi_{71}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{72}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{73}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{74}$ | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2H$ | | | | | | | | | | | | $2I$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AI$ | $4AJ$ | $4AK$ | $4AL$ | $4AM$ | $4AN$ | $2AJ$ | $4AO$ | $4AP$ | $4AQ$ | $4AR$ | $4AS$ | $2AK$ | $4AT$ | $4AU$ | $4AV$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_8$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | -3 | -3 |
| $\chi_{19}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 |
| $\chi_{29}$ | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{35}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 5 | 5 | 5 | 5 |
| $\chi_{37}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -5 | -5 | -5 | -5 |
| $\chi_{38}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{39}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{40}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -3 | 3 | 3 | 3 |
| $\chi_{41}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 3 | -3 | -3 | -3 |
| $\chi_{42}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{43}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{44}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -3 | 3 | 3 | 3 |
| $\chi_{47}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 3 | -3 | -3 | -3 |
| $\chi_{48}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 |
| $\chi_{53}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 |
| $\chi_{54}$ | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 3 | -3 | -3 | -3 |
| $\chi_{55}$ | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -3 | 3 | 3 | 3 |
| $\chi_{56}$ | 3 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 | 1 | -1 | -1 | -1 |
| $\chi_{57}$ | 3 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 | -1 | 1 | 1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 |
| $\chi_{65}$ | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 |
| $\chi_{66}$ | 4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{72}$ | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 |
| $\chi_{73}$ | -3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 | 5 | -5 | -5 | -5 |
| $\chi_{74}$ | -3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 | -5 | 5 | 5 | 5 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2I$ | | | | | | | | $2J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AW$ | $2AL$ | $4AX$ | $4AY$ | $4AZ$ | $4BA$ | $4BB$ | $4BC$ | $2AM$ | $2AN$ | $4BD$ | $4BE$ | $4BF$ | $4BG$ | $2AO$ | $4BH$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_4$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{28}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{35}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{36}$ | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{37}$ | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{38}$ | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{39}$ | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{40}$ | 3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{41}$ | -3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{42}$ | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{43}$ | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{46}$ | 3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{47}$ | -3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{52}$ | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{53}$ | -2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 |
| $\chi_{54}$ | -3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{55}$ | 3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{56}$ | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 |
| $\chi_{57}$ | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 3 | 3 | 3 | 3 | 3 | -3 | 3 | -3 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{64}$ | -2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{65}$ | 2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{72}$ | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{73}$ | -5 | 5 | 5 | 5 | 5 | -5 | 5 | -5 | -3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 |
| $\chi_{74}$ | 5 | -5 | -5 | -5 | -5 | 5 | -5 | 5 | -3 | -3 | -3 | -3 | -3 | 3 | -3 | 3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2J$ | | | | | | $3A$ | | | | | | | | $3B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AP$ | $2AQ$ | $4BI$ | $4BJ$ | $4BK$ | $4BL$ | $3A$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ | $6G$ | $3B$ | $6H$ | $6I$ | $6J$ | $6K$ | $6L$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_7$ | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{13}$ | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{14}$ | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{19}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{20}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{22}$ | -4 | -4 | -4 | -4 | -4 | -4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 2 | 2 | 2 | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 2 | 2 | 2 | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | 2 | 2 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{34}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{40}$ | -1 | -1 | -1 | 1 | 1 | -1 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{41}$ | -1 | -1 | -1 | 1 | 1 | -1 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{42}$ | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{43}$ | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{44}$ | -2 | -2 | -2 | 2 | 2 | -2 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | -2 | -2 | -2 | 2 | 2 | -2 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -1 | -1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | -1 | -1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | -2 | -2 | -2 | 2 | 2 | -2 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{49}$ | -2 | -2 | -2 | 2 | 2 | -2 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{50}$ | -2 | -2 | -2 | 2 | 2 | -2 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{51}$ | -2 | -2 | -2 | 2 | 2 | -2 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{52}$ | 2 | 2 | 2 | -2 | -2 | 2 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{53}$ | 2 | 2 | 2 | -2 | -2 | 2 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{54}$ | 1 | 1 | 1 | -1 | -1 | 1 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{55}$ | 1 | 1 | 1 | -1 | -1 | 1 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{56}$ | -3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{57}$ | -3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{59}$ | 4 | 4 | 4 | -4 | -4 | 4 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | -2 | -2 | 2 | 2 | -2 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | -2 | -2 | -2 | 2 | 2 | -2 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | -2 | -2 | -2 | 2 | 2 | -2 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | -2 | -2 | -2 | 2 | 2 | -2 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 4 | 4 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{71}$ | -1 | -1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | -1 | -1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 3 | 3 | 3 | -3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 3 | 3 | 3 | -3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 4A | | | | | | 4B | | | | | | 4C | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4BM$ | $4BN$ | $4BO$ | $4BP$ | $8A$ | $8B$ | $4BQ$ | $4BR$ | $4BS$ | $4BT$ | $8C$ | $8D$ | $4BU$ | $4BV$ | $4BW$ | $4BX$ | $4BY$ | $4BZ$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_4$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_8$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_9$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{14}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{16}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{18}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
| $\chi_{19}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | -4 | -4 |
| $\chi_{23}$ | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{26}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{27}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | 4 | 4 |
| $\chi_{30}$ | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{35}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 |
| $\chi_{36}$ | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{38}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{39}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{40}$ | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{41}$ | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{42}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{43}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{44}$ | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{45}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{46}$ | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{47}$ | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{48}$ | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{49}$ | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{50}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{51}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{52}$ | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{53}$ | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{54}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | 3 | -3 | -3 | -3 | 3 |
| $\chi_{55}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 3 | 3 | -3 | -3 | -3 | 3 |
| $\chi_{56}$ | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{57}$ | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 4 | -4 |
| $\chi_{60}$ | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{63}$ | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{64}$ | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{65}$ | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | -4 | 4 |
| $\chi_{67}$ | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 |
| $\chi_{72}$ | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 |
| $\chi_{73}$ | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{74}$ | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 1 | 1 | -1 | -1 | -1 | 1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 4D | | | | | | 4E | | | | | | | | 4F | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4CA$ | $4CB$ | $4CC$ | $4CD$ | $4CE$ | $4CF$ | $4CG$ | $4CH$ | $4CI$ | $4CJ$ | $4CK$ | $4CL$ | $4CM$ | $4CN$ | $4CO$ | $8E$ | $4CP$ | $8F$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 |
| $\chi_8$ | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 |
| $\chi_{11}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 |
| $\chi_{26}$ | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 |
| $\chi_{27}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | -4 | -4 | -4 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{35}$ | -3 | -3 | -3 | -3 | -3 | -3 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{36}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{38}$ | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{39}$ | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{40}$ | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{41}$ | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{42}$ | 1 | 1 | -1 | -1 | -1 | 1 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 | -1 | 1 |
| $\chi_{43}$ | 1 | 1 | -1 | -1 | -1 | 1 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 | 1 | -1 |
| $\chi_{44}$ | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{45}$ | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{46}$ | 1 | 1 | -1 | -1 | -1 | 1 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 | 1 | -1 | -1 | 1 |
| $\chi_{47}$ | 1 | 1 | -1 | -1 | -1 | 1 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | -1 | 1 | 1 | -1 |
| $\chi_{48}$ | -2 | -2 | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -2 | -2 | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | -2 | -2 | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | -2 | -2 | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | -2 | -2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 3 | 3 | -3 | -3 | -3 | 3 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{55}$ | 3 | 3 | -3 | -3 | -3 | 3 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{56}$ | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{57}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 4 | 4 | -4 | -4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 |
| $\chi_{63}$ | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 |
| $\chi_{64}$ | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | -4 | -4 | 4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | -3 | -3 | 3 | 3 | 3 | -3 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{72}$ | -3 | -3 | 3 | 3 | 3 | -3 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{73}$ | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{74}$ | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4F$ | | | | $4G$ | | | | | | | | $4H$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8G$ | $8H$ | $4CQ$ | $4CR$ | $4CS$ | $8I$ | $8J$ | $4CT$ | $8K$ | $4CU$ | $8L$ | $4CV$ | $4CW$ | $8M$ | $4CX$ | $8N$ | $4CY$ | $4CZ$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_5$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{35}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{36}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{38}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{39}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{40}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{41}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{42}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{43}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{44}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{47}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{55}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{56}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{57}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{72}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{73}$ | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{74}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4H$ | | $4I$ | | | | | | | | | | $4J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8O$ | $8P$ | $4DA$ | $4DB$ | $4DC$ | $4DD$ | $4DE$ | $8Q$ | $8R$ | $4DF$ | $8S$ | $8T$ | $4DG$ | $4DH$ | $4DI$ | $4DJ$ | $4DK$ | $8U$ | $8V$ | $8W$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_6$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_9$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{11}$ | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{35}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{36}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{37}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{38}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{39}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{40}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{41}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{42}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{43}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{46}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{47}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{48}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | -2 | -2 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | 2 | 2 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{55}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{56}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{57}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{72}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{73}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{74}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | $4H$ | $5A$ | | | | | | $6A$ | | | | | | | $6B$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4DL$ | $8X$ | $5A$ | $10A$ | $10B$ | $10C$ | $10D$ | $10E$ | $6M$ | $12A$ | $6N$ | $12B$ | $12C$ | $6O$ | $6P$ | $12D$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_3$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_4$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_5$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_8$ | -2 | -2 | 1 | 1 | 1 | 1 | 1 | 1 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_9$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{17}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{18}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{19}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{20}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 |
| $\chi_{23}$ | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_{24}$ | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_{25}$ | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{26}$ | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | -1 | -1 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | 1 | 1 |
| $\chi_{29}$ | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| $\chi_{34}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{39}$ | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{40}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{41}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{42}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{43}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{44}$ | -2 | -2 | 1 | 1 | 1 | 1 | -1 | -1 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | -1 |
| $\chi_{45}$ | 2 | 2 | 1 | 1 | 1 | 1 | -1 | -1 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | -1 |
| $\chi_{46}$ | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{54}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 |
| $\chi_{55}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 |
| $\chi_{56}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 |
| $\chi_{57}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{60}$ | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | -1 |
| $\chi_{61}$ | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | -1 |
| $\chi_{62}$ | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 |
| $\chi_{63}$ | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | 1 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | -1 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | -1 |
| $\chi_{66}$ | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{71}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6B$ | | | | $6C$ | | | | | | $6D$ | | | | $6E$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6Q$ | $12E$ | $12F$ | $12G$ | $6R$ | $12H$ | $12I$ | $6S$ | $12J$ | $12K$ | $6T$ | $12L$ | $6U$ | $12M$ | $6V$ | $12N$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_3$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_4$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | -1 | -1 |
| $\chi_6$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 2 | 2 | 2 | 2 | 1 | 1 |
| $\chi_7$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_8$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{12}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{13}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{15}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{17}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{21}$ | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 0 |
| $\chi_{22}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | 0 | 0 |
| $\chi_{23}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{24}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{25}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{26}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{27}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{28}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | -1 | -1 |
| $\chi_{31}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 |
| $\chi_{32}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{33}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -1 | -1 | -1 | -1 | 0 | 0 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{39}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{40}$ | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{41}$ | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{42}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 2 | -2 | 2 | -2 | -1 | -1 |
| $\chi_{43}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 2 | -2 | 2 | -2 | 1 | 1 |
| $\chi_{44}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{45}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{49}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{50}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{51}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{52}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{53}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{54}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{55}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{56}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{57}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{58}$ | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{59}$ | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{60}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{61}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{62}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{63}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{64}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 |
| $\chi_{65}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 2 | -2 | 2 | -2 | -1 | -1 |
| $\chi_{68}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 2 | -2 | 2 | -2 | 1 | 1 |
| $\chi_{69}$ | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{70}$ | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | -1 | 1 | -1 | 1 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | $6F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6W$ | $12O$ | $12P$ | $6X$ | $12Q$ | $12R$ | $6Y$ | $6Z$ | $6AA$ | $12S$ | $12T$ | $12U$ | $12V$ | $12W$ | $6AB$ | $12X$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_4$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_5$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_8$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{12}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{14}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{15}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{18}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{20}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{24}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{25}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{26}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{27}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{28}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{31}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{39}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{40}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{43}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{44}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{45}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{49}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{50}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{51}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{52}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{53}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{54}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{55}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{56}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{57}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{61}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{62}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{63}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{64}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{65}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 |
| $\chi_{68}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6G$ | | | | $6H$ | | | | | | $8A$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $12Y$ | $6AD$ | $12Z$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8Y$ | $8Z$ | $8AA$ | $8AB$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_4$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_5$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_6$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_8$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_9$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{10}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{11}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{12}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{13}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{14}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{15}$ | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{16}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{17}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{18}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{19}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{32}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{35}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{36}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 |
| $\chi_{37}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| $\chi_{38}$ | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{39}$ | -1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{40}$ | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{41}$ | -1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{42}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{43}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{46}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{47}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{48}$ | 1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{49}$ | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{50}$ | 1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{51}$ | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{52}$ | -1 | 1 | -1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{53}$ | 1 | -1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{54}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{55}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{56}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{57}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{69}$ | -1 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 1 | -1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |
| $\chi_{72}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{73}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 |
| $\chi_{74}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | | $8B$ | | | | $10A$ | | | | $12A$ | | | | $12B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8AC$ | $8AD$ | $8AE$ | $8AF$ | $10F$ | $20A$ | $10G$ | $20B$ | $12AA$ | $24A$ | $24B$ | $12AB$ | $12AC$ | $24C$ | $24D$ | $12AD$ |
| $\chi_1$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_2$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_3$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_4$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_5$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_6$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_7$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_8$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_9$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{10}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{11}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{12}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{13}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{14}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{15}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{16}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{17}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{18}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{19}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{20}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{21}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{22}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{23}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{24}$ | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{25}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{26}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{27}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| $\chi_{28}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | -1 |
| $\chi_{29}$ | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{30}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 |
| $\chi_{31}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{32}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{33}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{34}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{35}$ | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{36}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{37}$ | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{38}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{39}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{40}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{41}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{42}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{43}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{44}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{45}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{46}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{47}$ | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{48}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{49}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{50}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{51}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{52}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{53}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{54}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{55}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{56}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{57}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{58}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{59}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{60}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{61}$ | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{63}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{64}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{65}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{66}$ | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{67}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{68}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{69}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{70}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{71}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{72}$ | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{73}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{74}$ | -1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $1A$ | | | | | | | | $2A$ | | | | | | $2B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $4A$ | $4B$ | $2I$ | $4C$ | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ |
| $\chi_{75}$ | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{76}$ | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 |
| $\chi_{77}$ | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 |
| $\chi_{78}$ | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 |
| $\chi_{79}$ | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 |
| $\chi_{80}$ | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 |
| $\chi_{81}$ | 6 | 6 | 6 | -6 | -6 | 6 | 6 | -6 | -6 | -6 | -6 | -6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{82}$ | 6 | 6 | 6 | -6 | -6 | 6 | 6 | -6 | -6 | -6 | -6 | -6 | 6 | 6 | -2 | -2 | -2 | -2 |
| $\chi_{83}$ | 9 | 9 | 9 | -9 | -9 | 9 | 9 | -9 | 9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 |
| $\chi_{84}$ | 9 | 9 | 9 | -9 | -9 | 9 | 9 | -9 | 9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 |
| $\chi_{85}$ | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 10 | 10 | 2 | 2 | 2 | 2 |
| $\chi_{86}$ | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 10 | 10 | 2 | 2 | 2 | 2 |
| $\chi_{87}$ | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 10 | 10 | 2 | 2 | 2 | 2 |
| $\chi_{88}$ | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | -10 | -10 | -10 | -10 | 10 | 10 | 2 | 2 | 2 | 2 |
| $\chi_{89}$ | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | 10 | 10 | 10 | -10 | -10 | 10 | 10 | 10 | 10 |
| $\chi_{90}$ | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | 10 | 10 | 10 | -10 | -10 | 10 | 10 | 10 | 10 |
| $\chi_{91}$ | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | 15 | 15 | 15 | 15 | -15 | -15 | -1 | -1 | -1 | -1 |
| $\chi_{92}$ | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | 15 | 15 | 15 | 15 | -15 | -15 | -1 | -1 | -1 | -1 |
| $\chi_{93}$ | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | 15 | 15 | 15 | 15 | -15 | -15 | -1 | -1 | -1 | -1 |
| $\chi_{94}$ | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | 15 | 15 | 15 | 15 | -15 | -15 | -1 | -1 | -1 | -1 |
| $\chi_{95}$ | 16 | 16 | 16 | -16 | -16 | 16 | 16 | -16 | 16 | 16 | 16 | 16 | -16 | -16 | 16 | 16 | 16 | 16 |
| $\chi_{96}$ | 20 | 20 | 20 | -20 | -20 | 20 | 20 | -20 | -20 | -20 | -20 | -20 | 20 | 20 | 4 | 4 | 4 | 4 |
| $\chi_{97}$ | 24 | 24 | 24 | -24 | -24 | 24 | 24 | -24 | -24 | -24 | -24 | -24 | 24 | 24 | -8 | -8 | -8 | -8 |
| $\chi_{98}$ | 24 | 24 | 24 | -24 | -24 | 24 | 24 | -24 | -24 | -24 | -24 | -24 | 24 | 24 | -8 | -8 | -8 | -8 |
| $\chi_{99}$ | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | -30 | -30 | -30 | -30 | 30 | 30 | -10 | -10 | -10 | -10 |
| $\chi_{100}$ | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | -30 | -30 | -30 | -30 | 30 | 30 | -10 | -10 | -10 | -10 |
| $\chi_{101}$ | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | 30 | 30 | 30 | 30 | -30 | -30 | -2 | -2 | -2 | -2 |
| $\chi_{102}$ | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | 30 | 30 | 30 | 30 | -30 | -30 | -2 | -2 | -2 | -2 |
| $\chi_{103}$ | 36 | 36 | 36 | -36 | -36 | 36 | 36 | -36 | -36 | -36 | -36 | -36 | 36 | 36 | -12 | -12 | -12 | -12 |
| $\chi_{104}$ | 40 | 40 | 40 | -40 | -40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 40 | 40 | 8 | 8 | 8 | 8 |
| $\chi_{105}$ | 40 | 40 | 40 | -40 | -40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 40 | 40 | 8 | 8 | 8 | 8 |
| $\chi_{106}$ | 40 | 40 | 40 | -40 | -40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 40 | 40 | 8 | 8 | 8 | 8 |
| $\chi_{107}$ | 40 | 40 | 40 | -40 | -40 | 40 | 40 | -40 | -40 | -40 | -40 | -40 | 40 | 40 | 8 | 8 | 8 | 8 |
| $\chi_{108}$ | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | 45 | 45 | 45 | 45 | -45 | -45 | -3 | -3 | -3 | -3 |
| $\chi_{109}$ | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | 45 | 45 | 45 | 45 | -45 | -45 | -3 | -3 | -3 | -3 |
| $\chi_{110}$ | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | 45 | 45 | 45 | 45 | -45 | -45 | -3 | -3 | -3 | -3 |
| $\chi_{111}$ | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | 45 | 45 | 45 | 45 | -45 | -45 | -3 | -3 | -3 | -3 |
| $\chi_{112}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{113}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{114}$ | 5 | 5 | -5 | -5 | -5 | -5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 |
| $\chi_{115}$ | 5 | 5 | -5 | -5 | -5 | -5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 |
| $\chi_{116}$ | 5 | 5 | -5 | -5 | -5 | -5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 |
| $\chi_{117}$ | 5 | 5 | -5 | -5 | -5 | -5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 |
| $\chi_{118}$ | 6 | 6 | -6 | -6 | -6 | -6 | 6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{119}$ | 6 | 6 | -6 | -6 | -6 | -6 | 6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 | -2 | 2 | -2 | 2 |
| $\chi_{120}$ | 9 | 9 | -9 | -9 | -9 | -9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -9 |
| $\chi_{121}$ | 9 | 9 | -9 | -9 | -9 | -9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -9 |
| $\chi_{122}$ | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 10 | 10 | -10 | -10 | 10 | 2 | -2 | 2 | -2 |
| $\chi_{123}$ | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 10 | 10 | -10 | -10 | 10 | 2 | -2 | 2 | -2 |
| $\chi_{124}$ | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 10 | 10 | -10 | -10 | 10 | 2 | -2 | 2 | -2 |
| $\chi_{125}$ | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | -10 | 10 | 10 | -10 | -10 | 10 | 2 | -2 | 2 | -2 |
| $\chi_{126}$ | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 |
| $\chi_{127}$ | 10 | 10 | -10 | -10 | -10 | -10 | 10 | 10 | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 |
| $\chi_{128}$ | 15 | 15 | -15 | -15 | -15 | -15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -1 | 1 | -1 | 1 |
| $\chi_{129}$ | 15 | 15 | -15 | -15 | -15 | -15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -1 | 1 | -1 | 1 |
| $\chi_{130}$ | 15 | 15 | -15 | -15 | -15 | -15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -1 | 1 | -1 | 1 |
| $\chi_{131}$ | 15 | 15 | -15 | -15 | -15 | -15 | 15 | 15 | 15 | -15 | -15 | 15 | 15 | -15 | -1 | 1 | -1 | 1 |
| $\chi_{132}$ | 16 | 16 | -16 | -16 | -16 | -16 | 16 | 16 | 16 | -16 | -16 | 16 | 16 | -16 | 16 | -16 | 16 | -16 |
| $\chi_{133}$ | 20 | 20 | -20 | -20 | -20 | -20 | 20 | 20 | -20 | 20 | 20 | -20 | -20 | 20 | 4 | -4 | 4 | -4 |
| $\chi_{134}$ | 24 | 24 | -24 | -24 | -24 | -24 | 24 | 24 | -24 | 24 | 24 | -24 | -24 | 24 | -8 | 8 | -8 | 8 |
| $\chi_{135}$ | 24 | 24 | -24 | -24 | -24 | -24 | 24 | 24 | -24 | 24 | 24 | -24 | -24 | 24 | -8 | 8 | -8 | 8 |
| $\chi_{136}$ | 30 | 30 | -30 | -30 | -30 | -30 | 30 | 30 | -30 | 30 | 30 | -30 | -30 | 30 | -10 | 10 | -10 | 10 |
| $\chi_{137}$ | 30 | 30 | -30 | -30 | -30 | -30 | 30 | 30 | -30 | 30 | 30 | -30 | -30 | 30 | -10 | 10 | -10 | 10 |
| $\chi_{138}$ | 30 | 30 | -30 | -30 | -30 | -30 | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | -2 | 2 | -2 | 2 |
| $\chi_{139}$ | 30 | 30 | -30 | -30 | -30 | -30 | 30 | 30 | 30 | -30 | -30 | 30 | 30 | -30 | -2 | 2 | -2 | 2 |
| $\chi_{140}$ | 36 | 36 | -36 | -36 | -36 | -36 | 36 | 36 | -36 | 36 | 36 | -36 | -36 | 36 | -12 | 12 | -12 | 12 |
| $\chi_{141}$ | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 40 | 40 | -40 | -40 | 40 | 8 | -8 | 8 | -8 |
| $\chi_{142}$ | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 40 | 40 | -40 | -40 | 40 | 8 | -8 | 8 | -8 |
| $\chi_{143}$ | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 40 | 40 | -40 | -40 | 40 | 8 | -8 | 8 | -8 |
| $\chi_{144}$ | 40 | 40 | -40 | -40 | -40 | -40 | 40 | 40 | -40 | 40 | 40 | -40 | -40 | 40 | 8 | -8 | 8 | -8 |
| $\chi_{145}$ | 45 | 45 | -45 | -45 | -45 | -45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -3 | 3 | -3 | 3 |
| $\chi_{146}$ | 45 | 45 | -45 | -45 | -45 | -45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -3 | 3 | -3 | 3 |
| $\chi_{147}$ | 45 | 45 | -45 | -45 | -45 | -45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -3 | 3 | -3 | 3 |
| $\chi_{148}$ | 45 | 45 | -45 | -45 | -45 | -45 | 45 | 45 | 45 | -45 | -45 | 45 | 45 | -45 | -3 | 3 | -3 | 3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2B$ | | | | $2C$ | | | | | | | | $2D$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4D$ | $4E$ | $4F$ | $4G$ | $2O$ | $4H$ | $2P$ | $4I$ | $4J$ | $2Q$ | $4K$ | $4L$ | $2R$ | $4M$ | $4N$ | $2S$ | $4O$ | $4P$ |
| $\chi_{75}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{76}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{77}$ | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{78}$ | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{79}$ | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{80}$ | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | 5 | 5 | -5 | -5 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{81}$ | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{82}$ | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{83}$ | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 | 9 | 9 | -9 | -9 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{84}$ | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 | 9 | 9 | -9 | -9 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{85}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{86}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{87}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{88}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{89}$ | 10 | 10 | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{90}$ | 10 | 10 | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{91}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -5 | -5 | -5 | -5 | 5 | 5 |
| $\chi_{92}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 5 | 5 | 5 | 5 | -5 | -5 |
| $\chi_{93}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -7 | -7 | -7 | -7 | 7 | 7 |
| $\chi_{94}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 7 | 7 | 7 | 7 | -7 | -7 |
| $\chi_{95}$ | 16 | 16 | -16 | -16 | 16 | 16 | 16 | 16 | 16 | 16 | -16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 |
| $\chi_{98}$ | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 |
| $\chi_{99}$ | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{100}$ | -10 | -10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | -10 | -10 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{101}$ | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{102}$ | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{103}$ | -12 | -12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | -12 | -12 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 |
| $\chi_{105}$ | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | 8 | 8 | -8 | -8 |
| $\chi_{106}$ | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 8 | 8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 9 | 9 | 9 | 9 | -9 | -9 |
| $\chi_{109}$ | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | -9 | -9 | -9 | -9 | 9 | 9 |
| $\chi_{110}$ | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{111}$ | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{112}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{113}$ | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{114}$ | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{115}$ | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{116}$ | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{117}$ | 5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -5 | -5 | 5 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{118}$ | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{119}$ | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{120}$ | 9 | -9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -9 | -9 | 9 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{121}$ | 9 | -9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -9 | -9 | 9 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{122}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{123}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{124}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{125}$ | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{126}$ | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | -10 | 10 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{127}$ | 10 | -10 | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | -10 | 10 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{128}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -5 | 5 | 5 | -5 | -5 | 5 |
| $\chi_{129}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 5 | -5 | -5 | 5 | 5 | -5 |
| $\chi_{130}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -7 | 7 | 7 | -7 | -7 | 7 |
| $\chi_{131}$ | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | 7 | -7 | -7 | 7 | 7 | -7 |
| $\chi_{132}$ | 16 | -16 | -16 | 16 | 16 | -16 | 16 | -16 | 16 | -16 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | -8 | 8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 | -8 | 8 | 8 | -8 |
| $\chi_{135}$ | -8 | 8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | -8 | 8 | -8 | 8 | 8 | -8 | -8 | 8 |
| $\chi_{136}$ | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | -10 | 10 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{137}$ | -10 | 10 | 10 | -10 | 10 | -10 | 10 | -10 | 10 | -10 | -10 | 10 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{138}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{139}$ | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{140}$ | -12 | 12 | 12 | -12 | 12 | -12 | 12 | -12 | 12 | -12 | -12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | -8 | 8 | 8 | -8 | -8 | 8 |
| $\chi_{142}$ | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 |
| $\chi_{143}$ | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | 9 | -9 | -9 | 9 | 9 | -9 |
| $\chi_{146}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -9 | 9 | 9 | -9 | -9 | 9 |
| $\chi_{147}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{148}$ | -3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2D$ | | | | $2E$ | | | | | | | | | | | | $2F$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4Q$ | $4R$ | $4S$ | $2T$ | $2U$ | $2V$ | $4T$ | $4U$ | $4V$ | $4W$ | $2W$ | $4X$ | $2X$ | $4Y$ | $2Y$ | $2Z$ | $2AA$ | $4Z$ |
| $\chi_{75}$ | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{76}$ | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{77}$ | 3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{78}$ | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{79}$ | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 3 | -3 |
| $\chi_{80}$ | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -3 | 3 |
| $\chi_{81}$ | 4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{82}$ | -4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{83}$ | 3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{84}$ | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{85}$ | -4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{86}$ | -4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 |
| $\chi_{87}$ | 4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{88}$ | 4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 |
| $\chi_{89}$ | 2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 |
| $\chi_{90}$ | -2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{91}$ | 5 | -5 | -5 | 5 | -5 | -5 | -5 | 5 | 5 | -5 | -5 | -5 | 5 | 5 | -5 | 5 | 3 | -3 |
| $\chi_{92}$ | -5 | 5 | 5 | -5 | 5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | -5 | -5 | 5 | -5 | -3 | 3 |
| $\chi_{93}$ | 7 | -7 | -7 | 7 | -7 | -7 | -7 | 7 | 7 | -7 | -7 | -7 | 7 | 7 | -7 | 7 | -3 | 3 |
| $\chi_{94}$ | -7 | 7 | 7 | -7 | 7 | 7 | 7 | -7 | -7 | 7 | 7 | 7 | -7 | -7 | 7 | -7 | 3 | -3 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | -8 | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{98}$ | 8 | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{99}$ | 4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{100}$ | -4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{101}$ | -2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | 6 | -6 |
| $\chi_{102}$ | 2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | -6 | 6 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 8 | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{105}$ | -8 | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 |
| $\chi_{108}$ | -9 | 9 | 9 | -9 | 9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | -9 | -9 | 9 | -9 | -3 | 3 |
| $\chi_{109}$ | 9 | -9 | -9 | 9 | -9 | -9 | -9 | 9 | 9 | -9 | -9 | -9 | 9 | 9 | -9 | 9 | 3 | -3 |
| $\chi_{110}$ | 3 | -3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{111}$ | -3 | 3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{112}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{113}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{114}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | 1 | 1 |
| $\chi_{115}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | -1 | -1 |
| $\chi_{116}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 3 | 3 |
| $\chi_{117}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -3 | -3 |
| $\chi_{118}$ | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{119}$ | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{120}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 |
| $\chi_{121}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 |
| $\chi_{122}$ | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 4 |
| $\chi_{123}$ | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | -4 | -4 |
| $\chi_{124}$ | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | 4 | 4 |
| $\chi_{125}$ | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 |
| $\chi_{126}$ | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{127}$ | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{128}$ | -5 | -5 | 5 | 5 | -5 | -5 | 5 | 5 | 5 | 5 | -5 | -5 | 5 | -5 | 5 | -5 | 3 | 3 |
| $\chi_{129}$ | 5 | 5 | -5 | -5 | 5 | 5 | -5 | -5 | -5 | -5 | 5 | 5 | -5 | 5 | -5 | 5 | -3 | -3 |
| $\chi_{130}$ | -7 | -7 | 7 | 7 | -7 | -7 | 7 | 7 | 7 | 7 | -7 | -7 | 7 | -7 | 7 | -7 | -3 | -3 |
| $\chi_{131}$ | 7 | 7 | -7 | -7 | 7 | 7 | -7 | -7 | -7 | -7 | 7 | 7 | -7 | 7 | -7 | 7 | 3 | 3 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{135}$ | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{136}$ | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{137}$ | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{138}$ | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 6 | 6 |
| $\chi_{139}$ | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | -6 | -6 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 | -8 | 8 | 0 | 0 |
| $\chi_{142}$ | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 | 8 | -8 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 |
| $\chi_{145}$ | 9 | 9 | -9 | -9 | 9 | 9 | -9 | -9 | -9 | -9 | 9 | 9 | -9 | 9 | -9 | 9 | -3 | -3 |
| $\chi_{146}$ | -9 | -9 | 9 | 9 | -9 | -9 | 9 | 9 | 9 | 9 | -9 | -9 | 9 | -9 | 9 | -9 | 3 | 3 |
| $\chi_{147}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 |
| $\chi_{148}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2F$ | | | | | | $2G$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AB$ | $4AA$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $2AG$ | $2AH$ | $4AF$ | $4AG$ | $4AH$ | $4AI$ |
| $\chi_{75}$ | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{76}$ | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{77}$ | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{78}$ | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{79}$ | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{80}$ | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{84}$ | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{85}$ | -4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{86}$ | 4 | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 |
| $\chi_{87}$ | -4 | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 |
| $\chi_{88}$ | 4 | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 |
| $\chi_{89}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{90}$ | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{91}$ | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{92}$ | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{93}$ | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{94}$ | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -6 | 6 | -6 | 6 | -6 | 6 | 6 | 6 | -6 | -6 | -6 | 6 | -6 | 6 | -6 | 6 |
| $\chi_{102}$ | 6 | -6 | 6 | -6 | 6 | -6 | -6 | -6 | 6 | 6 | 6 | -6 | 6 | -6 | 6 | -6 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | -8 | 8 | -8 | 8 | -8 | 8 | -8 | -8 | 8 | 8 | 8 | -8 | 8 | -8 | 8 | -8 |
| $\chi_{107}$ | 8 | -8 | 8 | -8 | 8 | -8 | 8 | 8 | -8 | -8 | -8 | 8 | -8 | 8 | -8 | 8 |
| $\chi_{108}$ | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{109}$ | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{110}$ | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 3 | -3 |
| $\chi_{111}$ | -3 | 3 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | -3 | 3 |
| $\chi_{112}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{113}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{114}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{115}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{116}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{117}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{121}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{122}$ | -4 | -4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{123}$ | 4 | 4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{124}$ | -4 | -4 | 4 | 4 | -4 | -4 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 | -4 | 4 |
| $\chi_{125}$ | 4 | 4 | -4 | -4 | 4 | 4 | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | 4 | -4 |
| $\chi_{126}$ | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 |
| $\chi_{127}$ | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 |
| $\chi_{128}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{129}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{130}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{131}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | -6 | -6 | 6 | 6 | -6 | -6 | 6 | 6 | -6 | -6 | 6 | -6 | -6 | 6 | 6 | -6 |
| $\chi_{139}$ | 6 | 6 | -6 | -6 | 6 | 6 | -6 | -6 | 6 | 6 | -6 | 6 | 6 | -6 | -6 | 6 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | -8 | -8 | 8 | 8 | -8 | -8 | -8 | -8 | 8 | 8 | -8 | 8 | 8 | -8 | -8 | 8 |
| $\chi_{144}$ | 8 | 8 | -8 | -8 | 8 | 8 | 8 | 8 | -8 | -8 | 8 | -8 | -8 | 8 | 8 | -8 |
| $\chi_{145}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{146}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |
| $\chi_{147}$ | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 3 |
| $\chi_{148}$ | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2H$ | | | | | | | | | | | | $2I$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AI$ | $4AJ$ | $4AK$ | $4AL$ | $4AM$ | $4AN$ | $2AJ$ | $4AO$ | $4AP$ | $4AQ$ | $4AR$ | $4AS$ | $2AK$ | $4AT$ | $4AU$ | $4AV$ |
| $\chi_{75}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 |
| $\chi_{76}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{77}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -3 | 3 | -3 | -3 |
| $\chi_{78}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 3 | -3 | 3 | 3 |
| $\chi_{79}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{80}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 |
| $\chi_{81}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -3 | 3 | -3 | -3 |
| $\chi_{84}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 3 | -3 | 3 | 3 |
| $\chi_{85}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | -2 |
| $\chi_{90}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 |
| $\chi_{91}$ | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 3 | -3 | 3 | 3 |
| $\chi_{92}$ | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -3 | 3 | -3 | -3 |
| $\chi_{93}$ | 3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | 1 | -1 | 1 | 1 |
| $\chi_{94}$ | 3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -1 | 1 | -1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | 2 |
| $\chi_{102}$ | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 |
| $\chi_{103}$ | 4 | -4 | 4 | 4 | -4 | -4 | -4 | 4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 |
| $\chi_{109}$ | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{110}$ | -3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 5 | -5 | 5 | 5 |
| $\chi_{111}$ | -3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | -5 | 5 | -5 | -5 |
| $\chi_{112}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{113}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{114}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -3 | -3 | 3 | 3 |
| $\chi_{115}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | 3 | -3 | -3 |
| $\chi_{116}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{117}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{118}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -3 | -3 | 3 | 3 |
| $\chi_{121}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | 3 | -3 | -3 |
| $\chi_{122}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{127}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{128}$ | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 3 | 3 | -3 | -3 |
| $\chi_{129}$ | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -3 | -3 | 3 | 3 |
| $\chi_{130}$ | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{131}$ | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | -1 | -1 | 1 | 1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{139}$ | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{140}$ | 4 | 4 | -4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{146}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{147}$ | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 5 | 5 | -5 | -5 |
| $\chi_{148}$ | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | -5 | -5 | 5 | 5 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | | | | 2I | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4AW | 2AL | 4AX | 4AY | 4AZ | 4BA | 4BB | 4BC | 2AM | 2AN | 4BD | 4BE | 4BF | 4BG | 2AO | 4BH |
| $\chi_{75}$ | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{76}$ | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{77}$ | 3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{78}$ | -3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{79}$ | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{80}$ | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{83}$ | 3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{84}$ | -3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{89}$ | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{90}$ | -2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{91}$ | -3 | -3 | -3 | 3 | -3 | -3 | 3 | 3 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{92}$ | 3 | 3 | 3 | -3 | 3 | 3 | -3 | -3 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{93}$ | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{94}$ | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | -3 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{101}$ | -2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{102}$ | 2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | -4 | -4 | 4 | 4 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{109}$ | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{110}$ | -5 | -5 | -5 | 5 | -5 | -5 | 5 | 5 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{111}$ | 5 | 5 | 5 | -5 | 5 | 5 | -5 | -5 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 3 |
| $\chi_{112}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{113}$ | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{114}$ | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{115}$ | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{116}$ | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{117}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{120}$ | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{121}$ | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{126}$ | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 |
| $\chi_{127}$ | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 |
| $\chi_{128}$ | 3 | -3 | -3 | 3 | -3 | 3 | 3 | -3 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{129}$ | -3 | 3 | 3 | -3 | 3 | -3 | -3 | 3 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{130}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{131}$ | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 3 | 3 | -3 | -3 | 3 | -3 | -3 | 3 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{138}$ | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{139}$ | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | -4 | 4 | 4 | -4 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{146}$ | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{147}$ | 5 | -5 | -5 | 5 | -5 | 5 | 5 | -5 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 |
| $\chi_{148}$ | -5 | 5 | 5 | -5 | 5 | -5 | -5 | 5 | -3 | -3 | 3 | 3 | -3 | 3 | 3 | -3 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 2J | | | | | | 3A | | | | | | | | 3B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2AP | 2AQ | 4BI | 4BJ | 4BK | 4BL | 3A | 6A | 6B | 6C | 6D | 6E | 6F | 6G | 3B | 6H | 6I | 6J | 6K | 6L |
| $\chi_{75}$ | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{76}$ | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{77}$ | -1 | 1 | 1 | 1 | -1 | -1 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{78}$ | -1 | 1 | 1 | 1 | -1 | -1 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | -1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{79}$ | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{80}$ | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{81}$ | -2 | 2 | 2 | 2 | -2 | -2 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | -2 | 2 | 2 | 2 | -2 | -2 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | -1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | -1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | -2 | 2 | 2 | 2 | -2 | -2 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{86}$ | -2 | 2 | 2 | 2 | -2 | -2 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{87}$ | -2 | 2 | 2 | 2 | -2 | -2 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{88}$ | -2 | 2 | 2 | 2 | -2 | -2 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{89}$ | 2 | -2 | -2 | -2 | 2 | 2 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{90}$ | 2 | -2 | -2 | -2 | 2 | 2 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{91}$ | 1 | -1 | -1 | -1 | 1 | 1 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{92}$ | 1 | -1 | -1 | -1 | 1 | 1 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{93}$ | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{94}$ | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{96}$ | 4 | -4 | -4 | -4 | 4 | 4 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -2 | 2 | 2 | 2 | -2 | -2 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -2 | 2 | 2 | 2 | -2 | -2 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | -2 | 2 | 2 | 2 | -2 | -2 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | -2 | 2 | 2 | 2 | -2 | -2 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | 2 | 1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{108}$ | -1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | -1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 3 | -3 | -3 | -3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{113}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{114}$ | 1 | -1 | 1 | -1 | 1 | -1 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{115}$ | 1 | -1 | 1 | -1 | 1 | -1 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{116}$ | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{117}$ | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{118}$ | 2 | -2 | 2 | -2 | 2 | -2 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 2 | -2 | 2 | -2 | 2 | -2 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 2 | -2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{123}$ | 2 | -2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{124}$ | 2 | -2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{125}$ | 2 | -2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{126}$ | -2 | 2 | -2 | 2 | -2 | 2 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{127}$ | -2 | 2 | -2 | 2 | -2 | 2 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{128}$ | -1 | 1 | -1 | 1 | -1 | 1 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{129}$ | -1 | 1 | -1 | 1 | -1 | 1 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{130}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{131}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{133}$ | -4 | 4 | -4 | 4 | -4 | 4 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | -3 | -3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 2 | -2 | 2 | -2 | 2 | -2 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 2 | -2 | 2 | -2 | 2 | -2 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 2 | -2 | 2 | -2 | 2 | -2 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 2 | -2 | 2 | -2 | 2 | -2 | -3 | -3 | 3 | 3 | 3 | -3 | 3 | -3 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | -2 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{145}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 1 | -1 | 1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{147}$ | -3 | 3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | -3 | 3 | -3 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 4A | | | | | | 4B | | | | | | 4C | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4BM$ | $4BN$ | $4BO$ | $4BP$ | $8A$ | $8B$ | $4BQ$ | $4BR$ | $4BS$ | $4BT$ | $8C$ | $8D$ | $4BU$ | $4BV$ | $4BW$ | $4BX$ | $4BY$ | $4BZ$ |
| $\chi_{75}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{76}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{77}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{78}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{79}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{80}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{81}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{82}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{83}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{84}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{85}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{86}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{87}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{88}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{89}$ | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{90}$ | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{91}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{92}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 3 | 3 | 3 | 3 | -3 | -3 |
| $\chi_{93}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{94}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | -4 | -4 | 4 | 4 |
| $\chi_{97}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{100}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 |
| $\chi_{101}$ | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{102}$ | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 | 4 | -4 | -4 |
| $\chi_{104}$ | 4 | 4 | 4 | 4 | -4 | -4 | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | -4 | -4 | -4 | -4 | 4 | 4 | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{109}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | -3 | -3 | -3 | -3 | 3 | 3 |
| $\chi_{110}$ | -3 | -3 | -3 | -3 | 3 | 3 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{111}$ | 3 | 3 | 3 | 3 | -3 | -3 | 3 | 3 | 3 | 3 | -3 | -3 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{112}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{113}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{114}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{115}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{116}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{117}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{118}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{119}$ | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{120}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{121}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{122}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{123}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{124}$ | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{125}$ | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{126}$ | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{127}$ | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{128}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{129}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 3 | 3 | -3 | -3 | 3 | -3 |
| $\chi_{130}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{131}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | -4 | 4 |
| $\chi_{134}$ | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{137}$ | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | -2 | 2 |
| $\chi_{138}$ | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{139}$ | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | 2 | -2 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 4 | -4 |
| $\chi_{141}$ | 4 | -4 | 4 | -4 | 4 | -4 | -4 | 4 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | -4 | 4 | -4 | 4 | -4 | 4 | 4 | -4 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{146}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | 3 |
| $\chi_{147}$ | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | 1 | -1 |
| $\chi_{148}$ | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 3 | -3 | 1 | 1 | -1 | -1 | 1 | -1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4D$ | | | | | | $4E$ | | | | | | | | $4F$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4CA$ | $4CB$ | $4CC$ | $4CD$ | $4CE$ | $4CF$ | $4CG$ | $4CH$ | $4CI$ | $4CJ$ | $4CK$ | $4CL$ | $4CM$ | $4CN$ | $4CO$ | $8E$ | $4CP$ | $8F$ |
| $\chi_{75}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{76}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{77}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{78}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{79}$ | 1 | 1 | 1 | 1 | -1 | -1 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | 1 | -1 | 1 | -1 |
| $\chi_{80}$ | 1 | 1 | 1 | 1 | -1 | -1 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | -1 | 1 | -1 | 1 |
| $\chi_{81}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{82}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{83}$ | 1 | 1 | 1 | 1 | -1 | -1 | -3 | 3 | -3 | 3 | 3 | 3 | -3 | -3 | 1 | -1 | 1 | -1 |
| $\chi_{84}$ | 1 | 1 | 1 | 1 | -1 | -1 | 3 | -3 | 3 | -3 | -3 | -3 | 3 | 3 | -1 | 1 | -1 | 1 |
| $\chi_{85}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | -2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 3 | 3 | 3 | 3 | -3 | -3 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{92}$ | 3 | 3 | 3 | 3 | -3 | -3 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{93}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{94}$ | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 4 | 4 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 |
| $\chi_{100}$ | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 |
| $\chi_{101}$ | 2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 2 | 2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | -4 | -4 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -3 | -3 | -3 | -3 | 3 | 3 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{109}$ | -3 | -3 | -3 | -3 | 3 | 3 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{110}$ | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{111}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{112}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{113}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{114}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{115}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{116}$ | 1 | 1 | -1 | -1 | 1 | -1 | 3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | 1 | 1 | -1 | -1 |
| $\chi_{117}$ | 1 | 1 | -1 | -1 | 1 | -1 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | -1 | -1 | 1 | 1 |
| $\chi_{118}$ | 2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 |
| $\chi_{119}$ | 2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 |
| $\chi_{120}$ | 1 | 1 | -1 | -1 | 1 | -1 | -3 | -3 | 3 | 3 | 3 | -3 | -3 | 3 | 1 | 1 | -1 | -1 |
| $\chi_{121}$ | 1 | 1 | -1 | -1 | 1 | -1 | 3 | 3 | -3 | -3 | -3 | 3 | 3 | -3 | -1 | -1 | 1 | 1 |
| $\chi_{122}$ | -2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | -2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | -2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | -2 | -2 | 2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | -2 | -2 | 2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | -2 | -2 | 2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 3 | 3 | -3 | -3 | 3 | -3 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{129}$ | 3 | 3 | -3 | -3 | 3 | -3 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{130}$ | -1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{131}$ | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 4 | 4 | -4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | -2 | -2 |
| $\chi_{137}$ | 2 | 2 | -2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 |
| $\chi_{138}$ | 2 | 2 | -2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | -4 | -4 | 4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | -3 | -3 | 3 | 3 | -3 | 3 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{146}$ | -3 | -3 | 3 | 3 | -3 | 3 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{147}$ | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{148}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4F$ | | | | $4G$ | | | | | | | | $4H$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8G$ | $8H$ | $4CQ$ | $4CR$ | $4CS$ | $8I$ | $8J$ | $4CT$ | $8K$ | $4CU$ | $8L$ | $4CV$ | $4CW$ | $8M$ | $4CX$ | $8N$ | $4CY$ | $4CZ$ |
| $\chi_{75}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{76}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{77}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{78}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{79}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{80}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{81}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{84}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 2 | 2 | -2 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | -2 | -2 | 2 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{92}$ | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{93}$ | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{94}$ | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{109}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | -1 | 1 |
| $\chi_{110}$ | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{111}$ | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 |
| $\chi_{112}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{113}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{114}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{115}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{116}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{117}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{118}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{121}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | 2 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | -2 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | -2 | -2 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 2 | 2 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{129}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{130}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{131}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{146}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 |
| $\chi_{147}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 |
| $\chi_{148}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | -1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4H$ | | $4I$ | | | | | | | | | | $4J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8O$ | $8P$ | $4DA$ | $4DB$ | $4DC$ | $4DD$ | $4DE$ | $8Q$ | $8R$ | $4DF$ | $8S$ | $8T$ | $4DG$ | $4DH$ | $4DI$ | $4DJ$ | $4DK$ | $8U$ | $8V$ | $8W$ |
| $\chi_{75}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{76}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{77}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{78}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{79}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{80}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{83}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{84}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{85}$ | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | -2 | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | 2 | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{92}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{93}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{94}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{109}$ | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{110}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 |
| $\chi_{111}$ | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 |
| $\chi_{112}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{113}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{114}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{115}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{116}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{117}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{120}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{121}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{122}$ | -2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | 2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 2 | 2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | -2 | -2 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{129}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{130}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{131}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{146}$ | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{147}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{148}$ | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | $4H$ | | | | $5A$ | | | | | | $6A$ | | | | | | $6B$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4DL$ | $8X$ | $5A$ | $10A$ | $10B$ | $10C$ | $10D$ | $10E$ | $6M$ | $12A$ | $6N$ | $12B$ | $12C$ | $6O$ | $6P$ | $12D$ |
| $\chi_{75}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{76}$ | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{77}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{78}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{79}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{80}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{81}$ | -2 | -2 | 1 | 1 | -1 | -1 | -1 | 1 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 |
| $\chi_{82}$ | 2 | 2 | 1 | 1 | -1 | -1 | -1 | 1 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 |
| $\chi_{83}$ | -1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{91}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 |
| $\chi_{92}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 |
| $\chi_{93}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 |
| $\chi_{94}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 |
| $\chi_{95}$ | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | -2 |
| $\chi_{97}$ | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 |
| $\chi_{98}$ | 0 | 0 | -1 | -1 | 1 | 1 | 1 | -1 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 |
| $\chi_{99}$ | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 |
| $\chi_{100}$ | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | -3 | -3 | -1 | -1 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | -3 | -3 | -3 | 3 | 3 | 1 | 1 |
| $\chi_{103}$ | 0 | 0 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 |
| $\chi_{108}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{113}$ | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{114}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{115}$ | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{116}$ | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{117}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{118}$ | 2 | -2 | 1 | 1 | -1 | -1 | 1 | -1 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{119}$ | -2 | 2 | 1 | 1 | -1 | -1 | 1 | -1 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{120}$ | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | -1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{128}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{129}$ | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{130}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{131}$ | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{132}$ | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | -2 | 2 | -2 | 2 |
| $\chi_{134}$ | 0 | 0 | -1 | -1 | 1 | 1 | -1 | 1 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{135}$ | 0 | 0 | -1 | -1 | 1 | 1 | -1 | 1 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{136}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{137}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | -3 | 3 | -3 | -1 | 1 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -3 | 3 | -3 | 3 | -3 | 3 | 1 | -1 |
| $\chi_{140}$ | 0 | 0 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 2 | -2 | 2 | -2 |
| $\chi_{145}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{147}$ | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6B$ | | | | $6C$ | | | | | | $6D$ | | | | $6E$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6Q$ | $12E$ | $12F$ | $12G$ | $6R$ | $12H$ | $12I$ | $6S$ | $12J$ | $12K$ | $6T$ | $12L$ | $6U$ | $12M$ | $6V$ | $12N$ |
| $\chi_{75}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{76}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{77}$ | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{78}$ | 2 | 2 | -2 | -2 | 2 | 2 | 2 | 2 | -2 | -2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{79}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 2 | -2 | -2 | 2 | -1 | 1 |
| $\chi_{80}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 2 | -2 | -2 | 2 | 1 | -1 |
| $\chi_{81}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{82}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{86}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{87}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{88}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{89}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{90}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{91}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{92}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{93}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{94}$ | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{95}$ | -2 | -2 | 2 | 2 | -2 | -2 | -2 | -2 | 2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{96}$ | -2 | -2 | 2 | 2 | 2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{97}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{98}$ | 1 | 1 | -1 | -1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{99}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{100}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{101}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{102}$ | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 2 | -2 | -2 | 2 | -1 | 1 |
| $\chi_{105}$ | -1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | -1 | -1 | 2 | -2 | -2 | 2 | 1 | -1 |
| $\chi_{106}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{107}$ | 2 | 2 | -2 | -2 | -2 | -2 | -2 | -2 | 2 | 2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{113}$ | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{114}$ | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{115}$ | -2 | 2 | -2 | 2 | 2 | 2 | -2 | -2 | -2 | 2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{116}$ | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 2 | -2 | -2 | 2 | -1 | 1 |
| $\chi_{117}$ | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 2 | -2 | -2 | 2 | 1 | -1 |
| $\chi_{118}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{119}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{123}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{124}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{125}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{126}$ | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{127}$ | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{128}$ | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{129}$ | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{130}$ | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{131}$ | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{132}$ | 2 | -2 | 2 | -2 | -2 | -2 | 2 | 2 | 2 | -2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{133}$ | 2 | -2 | 2 | -2 | 2 | 2 | -2 | -2 | -2 | 2 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{134}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{135}$ | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{136}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{137}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{138}$ | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 |
| $\chi_{139}$ | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 2 | -2 | -2 | 2 | -1 | 1 |
| $\chi_{142}$ | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 2 | -2 | -2 | 2 | 1 | -1 |
| $\chi_{143}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{144}$ | -2 | 2 | -2 | 2 | -2 | -2 | 2 | 2 | 2 | -2 | -1 | 1 | 1 | -1 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | $6F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6W$ | $12O$ | $12P$ | $6X$ | $12Q$ | $12R$ | $6Y$ | $6Z$ | $6AA$ | $12S$ | $12T$ | $12U$ | $12V$ | $12W$ | $6AB$ | $12X$ |
| $\chi_{75}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{76}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{77}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{80}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{81}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{82}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{86}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{87}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{88}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{89}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{90}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{91}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{92}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{93}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{94}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{98}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{99}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{100}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{101}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{102}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 |
| $\chi_{105}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{113}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{114}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{117}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{118}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{119}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{123}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{124}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{125}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{126}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{127}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{128}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{129}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{130}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{131}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{135}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{136}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{137}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{138}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{139}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | -1 | 1 | -1 | 1 | -1 | 1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{142}$ | 1 | -1 | 1 | -1 | 1 | -1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6G$ | | | | $6H$ | | | | | | $8A$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $12Y$ | $6AD$ | $12Z$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8Y$ | $8Z$ | $8AA$ | $8AB$ |
| $\chi_{75}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 |
| $\chi_{76}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 |
| $\chi_{77}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | -1 | 1 | -1 | 1 |
| $\chi_{78}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 1 | -1 | 1 | -1 |
| $\chi_{79}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{80}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{83}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{84}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{85}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{86}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{87}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{88}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{89}$ | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{90}$ | 1 | -1 | -1 | 1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{91}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{92}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{93}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{94}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{106}$ | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{109}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{110}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | -1 | 1 |
| $\chi_{111}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | -1 |
| $\chi_{112}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{113}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{114}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{115}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{116}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{117}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{120}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{121}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{122}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{123}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{124}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{125}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{126}$ | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{127}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{128}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{129}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{130}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{131}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{143}$ | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | 1 | -1 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | 1 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |
| $\chi_{146}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{147}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 |
| $\chi_{148}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $8B$ | | | | $10A$ | | | | $12A$ | | | | $12B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8AC$ | $8AD$ | $8AE$ | $8AF$ | $10F$ | $20A$ | $10G$ | $20B$ | $12AA$ | $24A$ | $24B$ | $12AB$ | $12AC$ | $24C$ | $24D$ | $12AD$ |
| $\chi_{75}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{76}$ | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{77}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{78}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{79}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{80}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{81}$ | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{82}$ | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{83}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{84}$ | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{85}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{86}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{87}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{88}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{89}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{90}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{91}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{92}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{93}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{94}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{95}$ | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{96}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{97}$ | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{98}$ | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{99}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{100}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{101}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 |
| $\chi_{102}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 |
| $\chi_{103}$ | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{104}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | -1 | 1 | -1 | 1 | 1 | -1 |
| $\chi_{105}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 1 | 1 | -1 | 1 | -1 | -1 | 1 |
| $\chi_{106}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{107}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{108}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{109}$ | 1 | -1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{110}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{111}$ | -1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{112}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{113}$ | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{114}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{115}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{116}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{117}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{118}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{119}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{120}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{121}$ | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{122}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{123}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{124}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{125}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{126}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{127}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{128}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{129}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{130}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{131}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{132}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{133}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{134}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{135}$ | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{136}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{137}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{138}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | 1 | 1 | -1 | -1 |
| $\chi_{139}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | -1 | -1 | 1 | 1 |
| $\chi_{140}$ | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{141}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | -1 | -1 | -1 | -1 | 1 | 1 |
| $\chi_{142}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1 | 1 | 1 | 1 | 1 | -1 | -1 |
| $\chi_{143}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{144}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{145}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{146}$ | 1 | 1 | -1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{147}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{148}$ | -1 | -1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $1A$ | | | | | | | | $2A$ | | | | | | $2B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $4A$ | $4B$ | $2I$ | $4C$ | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ |
| $\chi_{149}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | 30 | 10 | -6 | -2 | 0 | 0 | 14 | 10 | -2 | -6 |
| $\chi_{150}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | -30 | -10 | 6 | 2 | 0 | 0 | -10 | -14 | 6 | 2 |
| $\chi_{151}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | -30 | -10 | 6 | 2 | 0 | 0 | -10 | -14 | 6 | 2 |
| $\chi_{152}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | 30 | 10 | -6 | -2 | 0 | 0 | 14 | 10 | -2 | -6 |
| $\chi_{153}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | 30 | 10 | -6 | -2 | 0 | 0 | 14 | 10 | -2 | -6 |
| $\chi_{154}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | -30 | -10 | 6 | 2 | 0 | 0 | -10 | -14 | 6 | 2 |
| $\chi_{155}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | -30 | -10 | 6 | 2 | 0 | 0 | -10 | -14 | 6 | 2 |
| $\chi_{156}$ | 30 | 30 | 10 | 0 | 0 | -6 | -2 | 0 | 30 | 10 | -6 | -2 | 0 | 0 | 14 | 10 | -2 | -6 |
| $\chi_{157}$ | 60 | 60 | 20 | 0 | 0 | -12 | -4 | 0 | 60 | 20 | -12 | -4 | 0 | 0 | 28 | 20 | -4 | -12 |
| $\chi_{158}$ | 60 | 60 | 20 | 0 | 0 | -12 | -4 | 0 | -60 | -20 | 12 | 4 | 0 | 0 | -20 | -28 | 12 | 4 |
| $\chi_{159}$ | 60 | 60 | 20 | 0 | 0 | -12 | -4 | 0 | -60 | -20 | 12 | 4 | 0 | 0 | -20 | -28 | 12 | 4 |
| $\chi_{160}$ | 60 | 60 | 20 | 0 | 0 | -12 | -4 | 0 | 60 | 20 | -12 | -4 | 0 | 0 | 28 | 20 | -4 | -12 |
| $\chi_{161}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{162}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{163}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{164}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{165}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | 42 | 30 | -6 | -18 |
| $\chi_{166}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | 42 | 30 | -6 | -18 |
| $\chi_{167}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | -30 | -42 | 18 | 6 |
| $\chi_{168}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | -30 | -42 | 18 | 6 |
| $\chi_{169}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | -30 | -42 | 18 | 6 |
| $\chi_{170}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | -30 | -42 | 18 | 6 |
| $\chi_{171}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | 42 | 30 | -6 | -18 |
| $\chi_{172}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | 42 | 30 | -6 | -18 |
| $\chi_{173}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{174}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{175}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{176}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{177}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{178}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{179}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{180}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{181}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{182}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | 90 | 30 | -18 | -6 | 0 | 0 | -6 | -18 | 10 | -2 |
| $\chi_{183}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{184}$ | 90 | 90 | 30 | 0 | 0 | -18 | -6 | 0 | -90 | -30 | 18 | 6 | 0 | 0 | 18 | 6 | 2 | -10 |
| $\chi_{185}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | 120 | 40 | -24 | -8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{186}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | 120 | 40 | -24 | -8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{187}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | -120 | -40 | 24 | 8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{188}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | -120 | -40 | 24 | 8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{189}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | -120 | -40 | 24 | 8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{190}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | -120 | -40 | 24 | 8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{191}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | 120 | 40 | -24 | -8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{192}$ | 120 | 120 | 40 | 0 | 0 | -24 | -8 | 0 | 120 | 40 | -24 | -8 | 0 | 0 | -8 | 8 | -8 | 8 |
| $\chi_{193}$ | 180 | 180 | 60 | 0 | 0 | -36 | -12 | 0 | 180 | 60 | -36 | -12 | 0 | 0 | -12 | -36 | 20 | -4 |
| $\chi_{194}$ | 180 | 180 | 60 | 0 | 0 | -36 | -12 | 0 | -180 | -60 | 36 | 12 | 0 | 0 | 36 | 12 | 4 | -20 |
| $\chi_{195}$ | 180 | 180 | 60 | 0 | 0 | -36 | -12 | 0 | -180 | -60 | 36 | 12 | 0 | 0 | 36 | 12 | 4 | -20 |
| $\chi_{196}$ | 180 | 180 | 60 | 0 | 0 | -36 | -12 | 0 | 180 | 60 | -36 | -12 | 0 | 0 | -12 | -36 | 20 | -4 |
| $\chi_{197}$ | 240 | 240 | 80 | 0 | 0 | -48 | -16 | 0 | 240 | 80 | -48 | -16 | 0 | 0 | -16 | 16 | -16 | 16 |
| $\chi_{198}$ | 240 | 240 | 80 | 0 | 0 | -48 | -16 | 0 | -240 | -80 | 48 | 16 | 0 | 0 | -16 | 16 | -16 | 16 |
| $\chi_{199}$ | 240 | 240 | 80 | 0 | 0 | -48 | -16 | 0 | -240 | -80 | 48 | 16 | 0 | 0 | -16 | 16 | -16 | 16 |
| $\chi_{200}$ | 240 | 240 | 80 | 0 | 0 | -48 | -16 | 0 | 240 | 80 | -48 | -16 | 0 | 0 | -16 | 16 | -16 | 16 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2B$ | | | | $2C$ | | | | | | | | $2D$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4D$ | $4E$ | $4F$ | $4G$ | $2O$ | $4H$ | $2P$ | $4I$ | $4J$ | $2Q$ | $4K$ | $4L$ | $2R$ | $4M$ | $4N$ | $2S$ | $4O$ | $4P$ |
| $\chi_{149}$ | -2 | 2 | 0 | 0 | 14 | 10 | -2 | -6 | -2 | 2 | 0 | 0 | 14 | 10 | -6 | -2 | -2 | 2 |
| $\chi_{150}$ | -2 | 2 | 0 | 0 | -10 | -14 | 6 | 2 | -2 | 2 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{151}$ | -2 | 2 | 0 | 0 | -10 | -14 | 6 | 2 | -2 | 2 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{152}$ | -2 | 2 | 0 | 0 | 14 | 10 | -2 | -6 | -2 | 2 | 0 | 0 | -14 | -10 | 6 | 2 | 2 | -2 |
| $\chi_{153}$ | -2 | 2 | 0 | 0 | 14 | 10 | -2 | -6 | -2 | 2 | 0 | 0 | -10 | -14 | 2 | 6 | -2 | 2 |
| $\chi_{154}$ | -2 | 2 | 0 | 0 | -10 | -14 | 6 | 2 | -2 | 2 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{155}$ | -2 | 2 | 0 | 0 | -10 | -14 | 6 | 2 | -2 | 2 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{156}$ | -2 | 2 | 0 | 0 | 14 | 10 | -2 | -6 | -2 | 2 | 0 | 0 | 10 | 14 | -2 | -6 | 2 | -2 |
| $\chi_{157}$ | -4 | 4 | 0 | 0 | 28 | 20 | -4 | -12 | -4 | 4 | 0 | 0 | 4 | -4 | -4 | 4 | -4 | 4 |
| $\chi_{158}$ | -4 | 4 | 0 | 0 | -20 | -28 | 12 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | -4 | 4 | 0 | 0 | -20 | -28 | 12 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | -4 | 4 | 0 | 0 | 28 | 20 | -4 | -12 | -4 | 4 | 0 | 0 | -4 | 4 | 4 | -4 | 4 | -4 |
| $\chi_{161}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{162}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{163}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | -18 | -6 | 10 | -2 | 6 | -6 |
| $\chi_{164}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | 6 | 18 | 2 | -10 | 6 | -6 |
| $\chi_{165}$ | -6 | 6 | 0 | 0 | 42 | 30 | -6 | -18 | -6 | 6 | 0 | 0 | 18 | 6 | -10 | 2 | -6 | 6 |
| $\chi_{166}$ | -6 | 6 | 0 | 0 | 42 | 30 | -6 | -18 | -6 | 6 | 0 | 0 | -6 | -18 | -2 | 10 | -6 | 6 |
| $\chi_{167}$ | -6 | 6 | 0 | 0 | -30 | -42 | 18 | 6 | -6 | 6 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{168}$ | -6 | 6 | 0 | 0 | -30 | -42 | 18 | 6 | -6 | 6 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{169}$ | -6 | 6 | 0 | 0 | -30 | -42 | 18 | 6 | -6 | 6 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{170}$ | -6 | 6 | 0 | 0 | -30 | -42 | 18 | 6 | -6 | 6 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{171}$ | -6 | 6 | 0 | 0 | 42 | 30 | -6 | -18 | -6 | 6 | 0 | 0 | -18 | -6 | 10 | -2 | 6 | -6 |
| $\chi_{172}$ | -6 | 6 | 0 | 0 | 42 | 30 | -6 | -18 | -6 | 6 | 0 | 0 | 6 | 18 | 2 | -10 | 6 | -6 |
| $\chi_{173}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | 18 | 6 | -10 | 2 | -6 | 6 |
| $\chi_{174}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | -6 | -18 | -2 | 10 | -6 | 6 |
| $\chi_{175}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{176}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{177}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{178}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{179}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | -6 | -18 | -2 | 10 | -6 | 6 |
| $\chi_{180}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | 18 | 6 | -10 | 2 | -6 | 6 |
| $\chi_{181}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | 6 | 18 | 2 | -10 | 6 | -6 |
| $\chi_{182}$ | -6 | 6 | 0 | 0 | 34 | 38 | -14 | -10 | 2 | -2 | 0 | 0 | -18 | -6 | 10 | -2 | 6 | -6 |
| $\chi_{183}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | 12 | 12 | -4 | -4 | 0 | 0 |
| $\chi_{184}$ | -6 | 6 | 0 | 0 | -38 | -34 | 10 | 14 | 2 | -2 | 0 | 0 | -12 | -12 | 4 | 4 | 0 | 0 |
| $\chi_{185}$ | 8 | -8 | 0 | 0 | -48 | -48 | 16 | 16 | 0 | 0 | 0 | 0 | -24 | -24 | 8 | 8 | 0 | 0 |
| $\chi_{186}$ | 8 | -8 | 0 | 0 | -48 | -48 | 16 | 16 | 0 | 0 | 0 | 0 | 24 | 24 | -8 | -8 | 0 | 0 |
| $\chi_{187}$ | 8 | -8 | 0 | 0 | 48 | 48 | -16 | -16 | 0 | 0 | 0 | 0 | 32 | 16 | -16 | 0 | -8 | 8 |
| $\chi_{188}$ | 8 | -8 | 0 | 0 | 48 | 48 | -16 | -16 | 0 | 0 | 0 | 0 | -16 | -32 | 0 | 16 | -8 | 8 |
| $\chi_{189}$ | 8 | -8 | 0 | 0 | 48 | 48 | -16 | -16 | 0 | 0 | 0 | 0 | 16 | 32 | 0 | -16 | 8 | -8 |
| $\chi_{190}$ | 8 | -8 | 0 | 0 | 48 | 48 | -16 | -16 | 0 | 0 | 0 | 0 | -32 | -16 | 16 | 0 | 8 | -8 |
| $\chi_{191}$ | 8 | -8 | 0 | 0 | -48 | -48 | 16 | 16 | 0 | 0 | 0 | 0 | -24 | -24 | 8 | 8 | 0 | 0 |
| $\chi_{192}$ | 8 | -8 | 0 | 0 | -48 | -48 | 16 | 16 | 0 | 0 | 0 | 0 | 24 | 24 | -8 | -8 | 0 | 0 |
| $\chi_{193}$ | -12 | 12 | 0 | 0 | 68 | 76 | -28 | -20 | 4 | -4 | 0 | 0 | 12 | -12 | -12 | 12 | -12 | 12 |
| $\chi_{194}$ | -12 | 12 | 0 | 0 | -76 | -68 | 20 | 28 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | -12 | 12 | 0 | 0 | -76 | -68 | 20 | 28 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | -12 | 12 | 0 | 0 | 68 | 76 | -28 | -20 | 4 | -4 | 0 | 0 | -12 | 12 | 12 | -12 | 12 | -12 |
| $\chi_{197}$ | 16 | -16 | 0 | 0 | -96 | -96 | 32 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 16 | -16 | 0 | 0 | 96 | 96 | -32 | -32 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | -16 | 16 |
| $\chi_{199}$ | 16 | -16 | 0 | 0 | 96 | 96 | -32 | -32 | 0 | 0 | 0 | 0 | -16 | 16 | 16 | -16 | 16 | -16 |
| $\chi_{200}$ | 16 | -16 | 0 | 0 | -96 | -96 | 32 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2D$ | | | | $2E$ | | | | | | | | | | | | $2F$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4Q$ | $4R$ | $4S$ | $2T$ | $2U$ | $2V$ | $4T$ | $4U$ | $4V$ | $4W$ | $2W$ | $4X$ | $2X$ | $4Y$ | $2Y$ | $2Z$ | $2AA$ | $4Z$ |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 14 | 14 | 10 | 0 | 0 | -6 | -2 | -2 | 0 | 0 | 2 | 0 | 6 | 0 |
| $\chi_{150}$ | -2 | 2 | -2 | 2 | 12 | 12 | 12 | -2 | -2 | -4 | -4 | 0 | 2 | -2 | 0 | 2 | 0 | -6 |
| $\chi_{151}$ | 2 | -2 | 2 | -2 | -12 | -12 | -12 | 2 | 2 | 4 | 4 | 0 | -2 | 2 | 0 | -2 | 0 | 6 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | -14 | -14 | -10 | 0 | 0 | 6 | 2 | 2 | 0 | 0 | -2 | 0 | -6 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | -10 | -10 | -14 | 0 | 0 | 2 | 6 | -2 | 0 | 0 | 2 | 0 | 6 | 0 |
| $\chi_{154}$ | -2 | 2 | -2 | 2 | -12 | -12 | -12 | -2 | -2 | 4 | 4 | 0 | 2 | -2 | 0 | 2 | 0 | -6 |
| $\chi_{155}$ | 2 | -2 | 2 | -2 | 12 | 12 | 12 | 2 | 2 | -4 | -4 | 0 | -2 | 2 | 0 | -2 | 0 | 6 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 10 | 10 | 14 | 0 | 0 | -2 | -6 | 2 | 0 | 0 | -2 | 0 | -6 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 4 | 4 | -4 | 0 | 0 | -4 | 4 | -4 | 0 | 0 | 4 | 0 | 12 | 0 |
| $\chi_{158}$ | -4 | 4 | -4 | 4 | 0 | 0 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | -4 | 0 | 4 | 0 | -12 |
| $\chi_{159}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | 4 | 0 | -4 | 0 | 12 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 0 | 0 | 4 | -4 | 4 | 0 | 0 | -4 | 0 | -12 | 0 |
| $\chi_{161}$ | -6 | 6 | -6 | 6 | 12 | 12 | 12 | -6 | -6 | -4 | -4 | 0 | 6 | -6 | 0 | 6 | -12 | -6 |
| $\chi_{162}$ | -6 | 6 | -6 | 6 | -12 | -12 | -12 | -6 | -6 | 4 | 4 | 0 | 6 | -6 | 0 | 6 | -12 | -6 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | -18 | -18 | -6 | 0 | 0 | 10 | -2 | 6 | 0 | 0 | -6 | 0 | -6 | -12 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 6 | 6 | 18 | 0 | 0 | 2 | -10 | 6 | 0 | 0 | -6 | 0 | -6 | -12 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 18 | 18 | 6 | 0 | 0 | -10 | 2 | -6 | 0 | 0 | 6 | 0 | -6 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | -6 | -6 | -18 | 0 | 0 | -2 | 10 | -6 | 0 | 0 | 6 | 0 | -6 | 0 |
| $\chi_{167}$ | 6 | -6 | 6 | -6 | -12 | -12 | -12 | 6 | 6 | 4 | 4 | 0 | -6 | 6 | 0 | -6 | 0 | -6 |
| $\chi_{168}$ | 6 | -6 | 6 | -6 | 12 | 12 | 12 | 6 | 6 | -4 | -4 | 0 | -6 | 6 | 0 | -6 | 0 | -6 |
| $\chi_{169}$ | -6 | 6 | -6 | 6 | 12 | 12 | 12 | -6 | -6 | -4 | -4 | 0 | 6 | -6 | 0 | 6 | 0 | 6 |
| $\chi_{170}$ | -6 | 6 | -6 | 6 | -12 | -12 | -12 | -6 | -6 | 4 | 4 | 0 | 6 | -6 | 0 | 6 | 0 | 6 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | -18 | -18 | -6 | 0 | 0 | 10 | -2 | 6 | 0 | 0 | -6 | 0 | 6 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 6 | 6 | 18 | 0 | 0 | 2 | -10 | 6 | 0 | 0 | -6 | 0 | 6 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 18 | 18 | 6 | 0 | 0 | -10 | 2 | -6 | 0 | 0 | 6 | 0 | 6 | 12 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | -6 | -6 | -18 | 0 | 0 | -2 | 10 | -6 | 0 | 0 | 6 | 0 | 6 | 12 |
| $\chi_{175}$ | 6 | -6 | 6 | -6 | -12 | -12 | -12 | 6 | 6 | 4 | 4 | 0 | -6 | 6 | 0 | -6 | 12 | 6 |
| $\chi_{176}$ | 6 | -6 | 6 | -6 | 12 | 12 | 12 | 6 | 6 | -4 | -4 | 0 | -6 | 6 | 0 | -6 | 12 | 6 |
| $\chi_{177}$ | 6 | -6 | 6 | -6 | 12 | 12 | 12 | 6 | 6 | -4 | -4 | 0 | -6 | 6 | 0 | -6 | -12 | 6 |
| $\chi_{178}$ | 6 | -6 | 6 | -6 | -12 | -12 | -12 | 6 | 6 | 4 | 4 | 0 | -6 | 6 | 0 | -6 | -12 | 6 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | -6 | -6 | -18 | 0 | 0 | -2 | 10 | -6 | 0 | 0 | 6 | 0 | 6 | -12 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 18 | 18 | 6 | 0 | 0 | -10 | 2 | -6 | 0 | 0 | 6 | 0 | 6 | -12 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 6 | 6 | 18 | 0 | 0 | 2 | -10 | 6 | 0 | 0 | -6 | 0 | -6 | 12 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | -18 | -18 | -6 | 0 | 0 | 10 | -2 | 6 | 0 | 0 | -6 | 0 | -6 | 12 |
| $\chi_{183}$ | -6 | 6 | -6 | 6 | -12 | -12 | -12 | -6 | -6 | 4 | 4 | 0 | 6 | -6 | 0 | 6 | 12 | -6 |
| $\chi_{184}$ | -6 | 6 | -6 | 6 | 12 | 12 | 12 | -6 | -6 | -4 | -4 | 0 | 6 | -6 | 0 | 6 | 12 | -6 |
| $\chi_{185}$ | 8 | -8 | 8 | -8 | -24 | -24 | -24 | -8 | -8 | 8 | 8 | 0 | 8 | -8 | 0 | 8 | 0 | 0 |
| $\chi_{186}$ | 8 | -8 | 8 | -8 | 24 | 24 | 24 | -8 | -8 | -8 | -8 | 0 | 8 | -8 | 0 | 8 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | -32 | -32 | -16 | 0 | 0 | 16 | 0 | 8 | 0 | 0 | -8 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 16 | 16 | 32 | 0 | 0 | 0 | -16 | 8 | 0 | 0 | -8 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | -16 | -16 | -32 | 0 | 0 | 0 | 16 | -8 | 0 | 0 | 8 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 32 | 32 | 16 | 0 | 0 | -16 | 0 | -8 | 0 | 0 | 8 | 0 | 0 | 0 |
| $\chi_{191}$ | -8 | 8 | -8 | 8 | -24 | -24 | -24 | 8 | 8 | 8 | 8 | 0 | -8 | 8 | 0 | -8 | 0 | 0 |
| $\chi_{192}$ | -8 | 8 | -8 | 8 | 24 | 24 | 24 | 8 | 8 | -8 | -8 | 0 | -8 | 8 | 0 | -8 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 12 | 12 | -12 | 0 | 0 | -12 | 12 | -12 | 0 | 0 | 12 | 0 | -12 | 0 |
| $\chi_{194}$ | 12 | -12 | 12 | -12 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | -12 | 12 | 0 | -12 | 0 | -12 |
| $\chi_{195}$ | -12 | 12 | -12 | 12 | 0 | 0 | 0 | -12 | -12 | 0 | 0 | 0 | 12 | -12 | 0 | 12 | 0 | 12 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | -12 | -12 | 12 | 0 | 0 | 12 | -12 | 12 | 0 | 0 | -12 | 0 | 12 | 0 |
| $\chi_{197}$ | 16 | -16 | 16 | -16 | 0 | 0 | 0 | -16 | -16 | 0 | 0 | 0 | 16 | -16 | 0 | 16 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | -16 | -16 | 16 | 0 | 0 | 16 | -16 | 16 | 0 | 0 | -16 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 16 | 16 | -16 | 0 | 0 | -16 | 16 | -16 | 0 | 0 | 16 | 0 | 0 | 0 |
| $\chi_{200}$ | -16 | 16 | -16 | 16 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | -16 | 16 | 0 | -16 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2F$ | | | | | | $2G$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AB$ | $4AA$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $2AG$ | $2AH$ | $4AF$ | $4AG$ | $4AH$ | $4AI$ |
| $\chi_{149}$ | 0 | -6 | 0 | -2 | 0 | 2 | 6 | 6 | 0 | 0 | 0 | -6 | 0 | -2 | 0 | 2 |
| $\chi_{150}$ | 6 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{151}$ | -6 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{152}$ | 0 | 6 | 0 | 2 | 0 | -2 | -6 | -6 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | -2 |
| $\chi_{153}$ | 0 | -6 | 0 | -2 | 0 | 2 | 6 | 6 | 0 | 0 | 0 | -6 | 0 | -2 | 0 | 2 |
| $\chi_{154}$ | 6 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{155}$ | -6 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{156}$ | 0 | 6 | 0 | 2 | 0 | -2 | -6 | -6 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | -2 |
| $\chi_{157}$ | 0 | -12 | 0 | -4 | 0 | 4 | 12 | 12 | 0 | 0 | 0 | -12 | 0 | -4 | 0 | 4 |
| $\chi_{158}$ | 12 | 0 | 4 | 0 | -4 | 0 | 0 | 0 | -12 | -12 | 12 | 0 | 4 | 0 | -4 | 0 |
| $\chi_{159}$ | -12 | 0 | -4 | 0 | 4 | 0 | 0 | 0 | 12 | 12 | -12 | 0 | -4 | 0 | 4 | 0 |
| $\chi_{160}$ | 0 | 12 | 0 | 4 | 0 | -4 | -12 | -12 | 0 | 0 | 0 | 12 | 0 | 4 | 0 | -4 |
| $\chi_{161}$ | 6 | 12 | 2 | 4 | -2 | -4 | 12 | 12 | -6 | -6 | 6 | -12 | 2 | -4 | -2 | 4 |
| $\chi_{162}$ | 6 | 12 | 2 | 4 | -2 | -4 | 12 | 12 | -6 | -6 | 6 | -12 | 2 | -4 | -2 | 4 |
| $\chi_{163}$ | 12 | 6 | 4 | 2 | -4 | -2 | -6 | -6 | 12 | 12 | -12 | 6 | -4 | 2 | 4 | -2 |
| $\chi_{164}$ | 12 | 6 | 4 | 2 | -4 | -2 | -6 | -6 | 12 | 12 | -12 | 6 | -4 | 2 | 4 | -2 |
| $\chi_{165}$ | 0 | 6 | 0 | 2 | 0 | -2 | -6 | -6 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | -2 |
| $\chi_{166}$ | 0 | 6 | 0 | 2 | 0 | -2 | -6 | -6 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | -2 |
| $\chi_{167}$ | 6 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{168}$ | 6 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{169}$ | -6 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{170}$ | -6 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{171}$ | 0 | -6 | 0 | -2 | 0 | 2 | 6 | 6 | 0 | 0 | 0 | -6 | 0 | -2 | 0 | 2 |
| $\chi_{172}$ | 0 | -6 | 0 | -2 | 0 | 2 | 6 | 6 | 0 | 0 | 0 | -6 | 0 | -2 | 0 | 2 |
| $\chi_{173}$ | -12 | -6 | -4 | -2 | 4 | 2 | 6 | 6 | -12 | -12 | 12 | -6 | 4 | -2 | -4 | 2 |
| $\chi_{174}$ | -12 | -6 | -4 | -2 | 4 | 2 | 6 | 6 | -12 | -12 | 12 | -6 | 4 | -2 | -4 | 2 |
| $\chi_{175}$ | -6 | -12 | -2 | -4 | 2 | 4 | -12 | -12 | 6 | 6 | -6 | 12 | -2 | 4 | 2 | -4 |
| $\chi_{176}$ | -6 | -12 | -2 | -4 | 2 | 4 | -12 | -12 | 6 | 6 | -6 | 12 | -2 | 4 | 2 | -4 |
| $\chi_{177}$ | -6 | 12 | -2 | 4 | 2 | -4 | 12 | 12 | 6 | 6 | -6 | -12 | -2 | -4 | 2 | 4 |
| $\chi_{178}$ | -6 | 12 | -2 | 4 | 2 | -4 | 12 | 12 | 6 | 6 | -6 | -12 | -2 | -4 | 2 | 4 |
| $\chi_{179}$ | 12 | -6 | 4 | -2 | -4 | 2 | 6 | 6 | 12 | 12 | -12 | -6 | -4 | -2 | 4 | 2 |
| $\chi_{180}$ | 12 | -6 | 4 | -2 | -4 | 2 | 6 | 6 | 12 | 12 | -12 | -6 | -4 | -2 | 4 | 2 |
| $\chi_{181}$ | -12 | 6 | -4 | 2 | 4 | -2 | -6 | -6 | -12 | -12 | 12 | 6 | 4 | 2 | -4 | -2 |
| $\chi_{182}$ | -12 | 6 | -4 | 2 | 4 | -2 | -6 | -6 | -12 | -12 | 12 | 6 | 4 | 2 | -4 | -2 |
| $\chi_{183}$ | 6 | -12 | 2 | -4 | -2 | 4 | -12 | -12 | -6 | -6 | 6 | 12 | 2 | 4 | -2 | -4 |
| $\chi_{184}$ | 6 | -12 | 2 | -4 | -2 | 4 | -12 | -12 | -6 | -6 | 6 | 12 | 2 | 4 | -2 | -4 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 12 | 0 | 4 | 0 | -4 | -12 | -12 | 0 | 0 | 0 | 12 | 0 | 4 | 0 | -4 |
| $\chi_{194}$ | 12 | 0 | 4 | 0 | -4 | 0 | 0 | 0 | -12 | -12 | 12 | 0 | 4 | 0 | -4 | 0 |
| $\chi_{195}$ | -12 | 0 | -4 | 0 | 4 | 0 | 0 | 0 | 12 | 12 | -12 | 0 | -4 | 0 | 4 | 0 |
| $\chi_{196}$ | 0 | -12 | 0 | -4 | 0 | 4 | 12 | 12 | 0 | 0 | 0 | -12 | 0 | -4 | 0 | 4 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2H$ | | | | | | | | | | | | $2I$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AI$ | $4AJ$ | $4AK$ | $4AL$ | $4AM$ | $4AN$ | $2AJ$ | $4AO$ | $4AP$ | $4AQ$ | $4AR$ | $4AS$ | $2AK$ | $4AT$ | $4AU$ | $4AV$ |
| $\chi_{149}$ | 6 | 0 | 2 | -6 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 6 | 0 | 2 | -6 |
| $\chi_{150}$ | -2 | 4 | 2 | 2 | -4 | 4 | -4 | -2 | 0 | 0 | 2 | -2 | 0 | 6 | 0 | 0 |
| $\chi_{151}$ | -2 | 4 | 2 | 2 | -4 | 4 | -4 | -2 | 0 | 0 | 2 | -2 | 0 | -6 | 0 | 0 |
| $\chi_{152}$ | 6 | 0 | 2 | -6 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | -6 | 0 | -2 | 6 |
| $\chi_{153}$ | -2 | 0 | -6 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | -2 | 2 | -2 | 0 | -6 | 2 |
| $\chi_{154}$ | -2 | -4 | 2 | 2 | 4 | -4 | 4 | -2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 |
| $\chi_{155}$ | -2 | -4 | 2 | 2 | 4 | -4 | 4 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{156}$ | -2 | 0 | -6 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | -2 | 2 | 2 | 0 | 6 | -2 |
| $\chi_{157}$ | 4 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | 4 | 4 | 0 | -4 | -4 |
| $\chi_{158}$ | -4 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | -4 | 0 | 4 | 0 | 0 |
| $\chi_{159}$ | -4 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | -4 | 0 | -4 | 0 | 0 |
| $\chi_{160}$ | 4 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | 4 | -4 | 0 | 4 | 4 |
| $\chi_{161}$ | -2 | 0 | 2 | 2 | -8 | 8 | 0 | -2 | -4 | 4 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{162}$ | -2 | -8 | 2 | 2 | 0 | 0 | 8 | -2 | -4 | 4 | 2 | -2 | 0 | -6 | 0 | 0 |
| $\chi_{163}$ | 6 | 4 | 2 | -6 | 4 | -4 | -4 | -2 | 4 | -4 | -2 | 2 | -2 | 0 | -6 | 2 |
| $\chi_{164}$ | -2 | 4 | -6 | 2 | 4 | -4 | -4 | 6 | 4 | -4 | -2 | 2 | 6 | 0 | 2 | -6 |
| $\chi_{165}$ | 2 | 0 | 6 | -2 | 0 | 0 | 0 | -6 | 0 | 0 | 2 | -2 | 10 | 0 | -2 | -10 |
| $\chi_{166}$ | -6 | 0 | -2 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 2 | 0 | -10 | -2 |
| $\chi_{167}$ | 2 | 4 | -2 | -2 | -4 | 4 | -4 | 2 | 0 | 0 | -2 | 2 | 0 | -10 | 0 | 0 |
| $\chi_{168}$ | 2 | -4 | -2 | -2 | 4 | -4 | 4 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{169}$ | 2 | 4 | -2 | -2 | -4 | 4 | -4 | 2 | 0 | 0 | -2 | 2 | 0 | 10 | 0 | 0 |
| $\chi_{170}$ | 2 | -4 | -2 | -2 | 4 | -4 | 4 | 2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 |
| $\chi_{171}$ | 2 | 0 | 6 | -2 | 0 | 0 | 0 | -6 | 0 | 0 | 2 | -2 | -10 | 0 | 2 | 10 |
| $\chi_{172}$ | -6 | 0 | -2 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | 0 | 10 | 2 |
| $\chi_{173}$ | 6 | 4 | 2 | -6 | 4 | -4 | -4 | -2 | 4 | -4 | -2 | 2 | 2 | 0 | 6 | -2 |
| $\chi_{174}$ | -2 | 4 | -6 | 2 | 4 | -4 | -4 | 6 | 4 | -4 | -2 | 2 | -6 | 0 | -2 | 6 |
| $\chi_{175}$ | -2 | 0 | 2 | 2 | -8 | 8 | 0 | -2 | -4 | 4 | 2 | -2 | 0 | -2 | 0 | 0 |
| $\chi_{176}$ | -2 | -8 | 2 | 2 | 0 | 0 | 8 | -2 | -4 | 4 | 2 | -2 | 0 | 6 | 0 | 0 |
| $\chi_{177}$ | -2 | 0 | 2 | 2 | 8 | -8 | 0 | -2 | 4 | -4 | 2 | -2 | 0 | 6 | 0 | 0 |
| $\chi_{178}$ | -2 | 8 | 2 | 2 | 0 | 0 | -8 | -2 | 4 | -4 | 2 | -2 | 0 | -2 | 0 | 0 |
| $\chi_{179}$ | -2 | -4 | -6 | 2 | -4 | 4 | 4 | 6 | -4 | 4 | -2 | 2 | -6 | 0 | -2 | 6 |
| $\chi_{180}$ | 6 | -4 | 2 | -6 | -4 | 4 | 4 | -2 | -4 | 4 | -2 | 2 | 2 | 0 | 6 | -2 |
| $\chi_{181}$ | -2 | -4 | -6 | 2 | -4 | 4 | 4 | 6 | -4 | 4 | -2 | 2 | 6 | 0 | 2 | -6 |
| $\chi_{182}$ | 6 | -4 | 2 | -6 | -4 | 4 | 4 | -2 | -4 | 4 | -2 | 2 | -2 | 0 | -6 | 2 |
| $\chi_{183}$ | -2 | 0 | 2 | 2 | 8 | -8 | 0 | -2 | 4 | -4 | 2 | -2 | 0 | -6 | 0 | 0 |
| $\chi_{184}$ | -2 | 8 | 2 | 2 | 0 | 0 | -8 | -2 | 4 | -4 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{185}$ | 0 | 8 | 0 | 0 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | -8 |
| $\chi_{186}$ | 0 | -8 | 0 | 0 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | -8 | 8 |
| $\chi_{187}$ | -8 | 0 | -8 | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 |
| $\chi_{188}$ | 8 | 0 | 8 | -8 | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 0 |
| $\chi_{189}$ | 8 | 0 | 8 | -8 | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 |
| $\chi_{190}$ | -8 | 0 | -8 | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 0 |
| $\chi_{191}$ | 0 | -8 | 0 | 0 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | -8 |
| $\chi_{192}$ | 0 | 8 | 0 | 0 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | -8 | 8 |
| $\chi_{193}$ | -4 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | -4 | -4 | 0 | 4 | 4 |
| $\chi_{194}$ | 4 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | 4 | 0 | 4 | 0 | 0 |
| $\chi_{195}$ | 4 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | 4 | 0 | -4 | 0 | 0 |
| $\chi_{196}$ | -4 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | -4 | 4 | 0 | -4 | -4 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2I$ | | | | | | | | $2J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AW$ | $2AL$ | $4AX$ | $4AY$ | $4AZ$ | $4BA$ | $4BB$ | $4BC$ | $2AM$ | $2AN$ | $4BD$ | $4BE$ | $4BF$ | $4BG$ | $2AO$ | $4BH$ |
| $\chi_{149}$ | 0 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 6 | 6 | 0 | 0 | -2 | -6 | 0 | 0 |
| $\chi_{150}$ | -2 | -6 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 4 | 4 | 2 | -2 | -4 | 4 |
| $\chi_{151}$ | 2 | 6 | -2 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 4 | 4 | 2 | -2 | -4 | 4 |
| $\chi_{152}$ | 0 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 6 | 6 | 0 | 0 | -2 | -6 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 6 | 0 | 0 | -2 | 2 | -2 | -2 | 0 | 0 | 6 | 2 | 0 | 0 |
| $\chi_{154}$ | 6 | 2 | -6 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | -4 | -4 | 2 | -2 | 4 | -4 |
| $\chi_{155}$ | -6 | -2 | 6 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | -4 | -4 | 2 | -2 | 4 | -4 |
| $\chi_{156}$ | 0 | 0 | 0 | -6 | 0 | 0 | 2 | -2 | -2 | -2 | 0 | 0 | 6 | 2 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 4 | 0 | 0 | -4 | 4 | 4 | 4 | 0 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{158}$ | 4 | -4 | -4 | 0 | 4 | -4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{159}$ | -4 | 4 | 4 | 0 | -4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | -4 | 0 | 0 | 4 | -4 | 4 | 4 | 0 | 0 | 4 | -4 | 0 | 0 |
| $\chi_{161}$ | -6 | -2 | 6 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 8 | 8 | 2 | -2 | 0 | 0 |
| $\chi_{162}$ | 2 | 6 | -2 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | -2 | 8 | -8 |
| $\chi_{163}$ | 0 | 0 | 0 | 6 | 0 | 0 | -2 | 2 | 6 | 6 | 4 | 4 | -2 | -6 | 4 | -4 |
| $\chi_{164}$ | 0 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | -2 | -2 | 4 | 4 | 6 | 2 | 4 | -4 |
| $\chi_{165}$ | 0 | 0 | 0 | 2 | 0 | 0 | -6 | 6 | 2 | 2 | 0 | 0 | -6 | -2 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 10 | 0 | 0 | -6 | 6 | -6 | -6 | 0 | 0 | 2 | 6 | 0 | 0 |
| $\chi_{167}$ | -2 | 10 | 2 | 0 | -6 | 6 | 0 | 0 | -2 | -2 | 4 | 4 | -2 | 2 | -4 | 4 |
| $\chi_{168}$ | -10 | 2 | 10 | 0 | -6 | 6 | 0 | 0 | -2 | -2 | -4 | -4 | -2 | 2 | 4 | -4 |
| $\chi_{169}$ | 2 | -10 | -2 | 0 | 6 | -6 | 0 | 0 | -2 | -2 | 4 | 4 | -2 | 2 | -4 | 4 |
| $\chi_{170}$ | 10 | -2 | -10 | 0 | 6 | -6 | 0 | 0 | -2 | -2 | -4 | -4 | -2 | 2 | 4 | -4 |
| $\chi_{171}$ | 0 | 0 | 0 | -2 | 0 | 0 | 6 | -6 | 2 | 2 | 0 | 0 | -6 | -2 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | -10 | 0 | 0 | 6 | -6 | -6 | -6 | 0 | 0 | 2 | 6 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | -6 | 0 | 0 | 2 | -2 | 6 | 6 | 4 | 4 | -2 | -6 | 4 | -4 |
| $\chi_{174}$ | 0 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | -2 | 4 | 4 | 6 | 2 | 4 | -4 |
| $\chi_{175}$ | 6 | 2 | -6 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 8 | 8 | 2 | -2 | 0 | 0 |
| $\chi_{176}$ | -2 | -6 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | -2 | 8 | -8 |
| $\chi_{177}$ | -2 | -6 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | -8 | -8 | 2 | -2 | 0 | 0 |
| $\chi_{178}$ | 6 | 2 | -6 | 0 | 2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | -2 | -8 | 8 |
| $\chi_{179}$ | 0 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | -2 | -4 | -4 | 6 | 2 | -4 | 4 |
| $\chi_{180}$ | 0 | 0 | 0 | -6 | 0 | 0 | 2 | -2 | 6 | 6 | -4 | -4 | -2 | -6 | -4 | 4 |
| $\chi_{181}$ | 0 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | -2 | -2 | -4 | -4 | 6 | 2 | -4 | 4 |
| $\chi_{182}$ | 0 | 0 | 0 | 6 | 0 | 0 | -2 | 2 | 6 | 6 | -4 | -4 | -2 | -6 | -4 | 4 |
| $\chi_{183}$ | 2 | 6 | -2 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | -8 | -8 | 2 | -2 | 0 | 0 |
| $\chi_{184}$ | -6 | -2 | 6 | 0 | -2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | -2 | -8 | 8 |
| $\chi_{185}$ | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | -8 |
| $\chi_{186}$ | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | 8 |
| $\chi_{187}$ | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | -8 | 0 | 0 |
| $\chi_{188}$ | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | 8 | 0 | 0 |
| $\chi_{189}$ | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | 8 | 0 | 0 |
| $\chi_{190}$ | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | -8 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | 8 |
| $\chi_{192}$ | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | -8 |
| $\chi_{193}$ | 0 | 0 | 0 | -4 | 0 | 0 | 4 | -4 | -4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{194}$ | 4 | -4 | -4 | 0 | 4 | -4 | 0 | 0 | -4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{195}$ | -4 | 4 | 4 | 0 | -4 | 4 | 0 | 0 | -4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 4 | 0 | 0 | -4 | 4 | -4 | -4 | 0 | 0 | -4 | 4 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2J$ | | | | | | $3A$ | | | | | | | | $3B$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AP$ | $2AQ$ | $4BI$ | $4BJ$ | $4BK$ | $4BL$ | $3A$ | $6A$ | $6B$ | $6C$ | $6D$ | $6E$ | $6F$ | $6G$ | $3B$ | $6H$ | $6I$ | $6J$ | $6K$ | $6L$ |
| $\chi_{149}$ | 0 | 2 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | -4 | -2 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | -4 | -2 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 2 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | -6 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 4 | -2 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 4 | -2 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | -6 | 0 | 0 | -2 | 2 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | -4 | 0 | 0 | -4 | 4 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | -4 | 0 | 0 | -4 | 4 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | -4 | 0 | 0 | -4 | 4 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | -4 | 0 | 0 | -4 | 4 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | -8 | -2 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | -2 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | -4 | 2 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | -4 | -6 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | -2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | -4 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 4 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | -4 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 4 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | -2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | -4 | 2 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | -4 | -6 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | -8 | -2 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | -2 | 4 | -4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 8 | -2 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | -2 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 4 | -6 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 4 | 2 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 4 | -6 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 4 | 2 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 8 | -2 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | -2 | -4 | 4 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | -8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 8 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | -8 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | -8 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 8 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | -8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 4A | | | | | | 4B | | | | | | 4C | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4BM | 4BN | 4BO | 4BP | 8A | 8B | 4BQ | 4BR | 4BS | 4BT | 8C | 8D | 4BU | 4BV | 4BW | 4BX | 4BY | 4BZ |
| $\chi_{149}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{150}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{151}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{152}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{153}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{154}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{155}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{156}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{161}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{162}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{163}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{164}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{165}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{166}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{167}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{168}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{169}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{170}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{171}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{172}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{173}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{174}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{175}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{176}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{177}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{178}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{179}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{180}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{181}$ | -6 | -6 | 2 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{182}$ | 6 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{183}$ | -6 | -6 | 2 | 2 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{184}$ | 6 | 6 | -2 | -2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 4D | | | | | | 4E | | | | | | | | 4F | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4CA | 4CB | 4CC | 4CD | 4CE | 4CF | 4CG | 4CH | 4CI | 4CJ | 4CK | 4CL | 4CM | 4CN | 4CO | 8E | 4CP | 8F |
| $\chi_{149}$ | 2 | -2 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{150}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | 0 | 2 | 0 |
| $\chi_{151}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 2 | 0 | -2 | 0 |
| $\chi_{152}$ | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{153}$ | 2 | -2 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{154}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | 2 | 0 | -2 | 0 |
| $\chi_{155}$ | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | -2 | 0 | 2 | 0 |
| $\chi_{156}$ | 2 | -2 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{157}$ | 4 | -4 | -4 | 4 | 0 | 0 | 4 | 0 | -4 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | -4 | 0 | 4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 4 | 0 | -4 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 0 | 4 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 2 |
| $\chi_{162}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | -2 |
| $\chi_{163}$ | -2 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 |
| $\chi_{164}$ | -2 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 |
| $\chi_{165}$ | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{166}$ | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{167}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | -2 | 0 | 2 | 0 |
| $\chi_{168}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | 2 | 0 | -2 | 0 |
| $\chi_{169}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 2 | 0 | -2 | 0 |
| $\chi_{170}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | -2 | 0 | 2 | 0 |
| $\chi_{171}$ | -2 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 |
| $\chi_{172}$ | -2 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 |
| $\chi_{173}$ | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | -2 |
| $\chi_{174}$ | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | 2 |
| $\chi_{175}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | -2 |
| $\chi_{176}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 2 |
| $\chi_{177}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | -2 |
| $\chi_{178}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 2 |
| $\chi_{179}$ | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | -2 |
| $\chi_{180}$ | -2 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | 2 |
| $\chi_{181}$ | -2 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | 2 |
| $\chi_{182}$ | -2 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 |
| $\chi_{183}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 2 |
| $\chi_{184}$ | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | -2 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 4 | -4 | -4 | 4 | 0 | 0 | 4 | 0 | -4 | 0 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | 4 | 0 | -4 | 0 | 0 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 4 | -4 | -4 | 4 | 0 | 0 | 0 | -4 | 0 | 4 | 0 | 0 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 4 | -4 | -4 | 4 | 0 | 0 | -4 | 0 | 4 | 0 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4F$ | | | | $4G$ | | | | | | | | $4H$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8G$ | $8H$ | $4CQ$ | $4CR$ | $4CS$ | $8I$ | $8J$ | $4CT$ | $8K$ | $4CU$ | $8L$ | $4CV$ | $4CW$ | $8M$ | $4CX$ | $8N$ | $4CY$ | $4CZ$ |
| $\chi_{149}$ | 2 | -2 | 0 | 0 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{150}$ | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{151}$ | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{152}$ | -2 | 2 | 0 | 0 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{153}$ | -2 | 2 | 0 | 0 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{154}$ | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{155}$ | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{156}$ | 2 | -2 | 0 | 0 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 2 | -2 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{162}$ | 0 | 0 | -2 | 2 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{163}$ | 0 | 0 | 2 | -2 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{164}$ | 0 | 0 | -2 | 2 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{165}$ | -2 | 2 | 0 | 0 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{166}$ | 2 | -2 | 0 | 0 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{167}$ | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{168}$ | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{169}$ | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{170}$ | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{171}$ | 2 | -2 | 0 | 0 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{172}$ | -2 | 2 | 0 | 0 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{173}$ | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{174}$ | 0 | 0 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{175}$ | 0 | 0 | -2 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{176}$ | 0 | 0 | 2 | -2 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{177}$ | 0 | 0 | -2 | 2 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{178}$ | 0 | 0 | 2 | -2 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{179}$ | 0 | 0 | -2 | 2 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{180}$ | 0 | 0 | 2 | -2 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{181}$ | 0 | 0 | 2 | -2 | 2 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{182}$ | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{183}$ | 0 | 0 | 2 | -2 | 0 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | -2 | 2 | 0 |
| $\chi_{184}$ | 0 | 0 | -2 | 2 | 0 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 2 | -2 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4H$ | | $4I$ | | | | | | | | | | $4J$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8O$ | $8P$ | $4DA$ | $4DB$ | $4DC$ | $4DD$ | $4DE$ | $8Q$ | $8R$ | $4DF$ | $8S$ | $8T$ | $4DG$ | $4DH$ | $4DI$ | $4DJ$ | $4DK$ | $8U$ | $8V$ | $8W$ |
| $\chi_{149}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{150}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{151}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{152}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{153}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{154}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{155}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{156}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{162}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{163}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{164}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{165}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{166}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{167}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{168}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{169}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{170}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{171}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | -2 |
| $\chi_{172}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 2 |
| $\chi_{173}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{174}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{175}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{176}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{177}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{178}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{179}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{180}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{181}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{182}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{183}$ | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | -2 | 0 |
| $\chi_{184}$ | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 2 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | $4H$ | | | | $5A$ | | | | | | $6A$ | | | | | | $6B$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4DL$ | $8X$ | $5A$ | $10A$ | $10B$ | $10C$ | $10D$ | $10E$ | $6M$ | $12A$ | $6N$ | $12B$ | $12C$ | $6O$ | $6P$ | $12D$ |
| $\chi_{149}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | 2 |
| $\chi_{150}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | 2 |
| $\chi_{151}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | 2 |
| $\chi_{152}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | 2 |
| $\chi_{153}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | 2 |
| $\chi_{154}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | 2 |
| $\chi_{155}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | 2 |
| $\chi_{156}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | 2 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | -2 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | -2 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | -2 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | -2 |
| $\chi_{161}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | -2 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | -2 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | -2 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | -2 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | -2 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -2 | -2 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | -2 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | -2 | -2 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | 2 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | 2 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -2 | -2 | 0 | 0 | 2 | 2 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | 2 | 2 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6B$ | | | | $6C$ | | | | | | $6D$ | | | | $6E$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6Q$ | $12E$ | $12F$ | $12G$ | $6R$ | $12H$ | $12I$ | $6S$ | $12J$ | $12K$ | $6T$ | $12L$ | $6U$ | $12M$ | $6V$ | $12N$ |
| $\chi_{149}$ | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{150}$ | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{151}$ | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{152}$ | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{153}$ | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{154}$ | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{155}$ | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{156}$ | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{157}$ | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{158}$ | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{159}$ | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{160}$ | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{186}$ | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{187}$ | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{188}$ | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{189}$ | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{190}$ | 2 | 2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{191}$ | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{192}$ | 2 | 2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{198}$ | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{199}$ | -2 | -2 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{200}$ | -2 | -2 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | $6F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6W$ | $12O$ | $12P$ | $6X$ | $12Q$ | $12R$ | $6Y$ | $6Z$ | $6AA$ | $12S$ | $12T$ | $12U$ | $12V$ | $12W$ | $6AB$ | $12X$ |
| $\chi_{149}$ | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{150}$ | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 |
| $\chi_{151}$ | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 |
| $\chi_{152}$ | -2 | 0 | 2 | 0 | 0 | 2 | 0 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{153}$ | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{154}$ | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 |
| $\chi_{155}$ | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 |
| $\chi_{156}$ | -2 | 0 | 2 | 0 | 0 | 2 | 0 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{157}$ | -2 | 0 | 2 | 0 | 0 | 2 | 0 | -2 | -2 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{158}$ | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 |
| $\chi_{159}$ | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 |
| $\chi_{160}$ | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 2 | 2 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 |
| $\chi_{186}$ | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 |
| $\chi_{187}$ | -2 | 0 | 2 | 0 | 0 | 2 | 0 | -2 | 2 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{188}$ | -2 | 0 | 2 | 0 | 0 | 2 | 0 | -2 | 2 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{189}$ | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 2 | -2 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{190}$ | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 2 | -2 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{191}$ | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 |
| $\chi_{192}$ | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 |
| $\chi_{198}$ | 2 | 0 | -2 | 0 | 0 | -2 | 0 | 2 | -2 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{199}$ | -2 | 0 | 2 | 0 | 0 | 2 | 0 | -2 | 2 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{200}$ | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | | $6G$ | | | | $6H$ | | | | $8A$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $12Y$ | $6AD$ | $12Z$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8Y$ | $8Z$ | $8AA$ | $8AB$ |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $8B$ | | | | $10A$ | | | | $12A$ | | | | $12B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8AC$ | $8AD$ | $8AE$ | $8AF$ | $10F$ | $20A$ | $10G$ | $20B$ | $12AA$ | $24A$ | $24B$ | $12AB$ | $12AC$ | $24C$ | $24D$ | $12AD$ |
| $\chi_{149}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{150}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{151}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{152}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{153}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{154}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{155}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{156}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{157}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{158}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{159}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{160}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{161}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{162}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{163}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{164}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{165}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{166}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{167}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{168}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{169}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{170}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{171}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{172}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{173}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{174}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{175}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{176}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{177}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{178}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{179}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{180}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{181}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{182}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{183}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{184}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{185}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{186}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{187}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{188}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{189}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{190}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{191}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{192}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{193}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{194}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{195}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{196}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{197}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{198}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{199}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{200}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $1A$ | | | | | | | | $2A$ | | | | | | $2B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $1A$ | $2A$ | $2B$ | $2C$ | $2D$ | $2E$ | $2F$ | $2G$ | $2H$ | $4A$ | $4B$ | $2I$ | $4C$ | $2J$ | $2K$ | $2L$ | $2M$ | $2N$ |
| $\chi_{201}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | 30 | -10 | 6 | -2 | 0 | 0 | 14 | -10 | -2 | 6 |
| $\chi_{202}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | -30 | 10 | -6 | 2 | 0 | 0 | -10 | 14 | 6 | -2 |
| $\chi_{203}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | -30 | 10 | -6 | 2 | 0 | 0 | -10 | 14 | 6 | -2 |
| $\chi_{204}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | 30 | -10 | 6 | -2 | 0 | 0 | 14 | -10 | -2 | 6 |
| $\chi_{205}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | 30 | -10 | 6 | -2 | 0 | 0 | 14 | -10 | -2 | 6 |
| $\chi_{206}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | -30 | 10 | -6 | 2 | 0 | 0 | -10 | 14 | 6 | -2 |
| $\chi_{207}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | -30 | 10 | -6 | 2 | 0 | 0 | -10 | 14 | 6 | -2 |
| $\chi_{208}$ | 30 | 30 | -10 | 0 | 0 | 6 | -2 | 0 | 30 | -10 | 6 | -2 | 0 | 0 | 14 | -10 | -2 | 6 |
| $\chi_{209}$ | 60 | 60 | -20 | 0 | 0 | 12 | -4 | 0 | 60 | -20 | 12 | -4 | 0 | 0 | 28 | -20 | -4 | 12 |
| $\chi_{210}$ | 60 | 60 | -20 | 0 | 0 | 12 | -4 | 0 | -60 | 20 | -12 | 4 | 0 | 0 | -20 | 28 | 12 | -4 |
| $\chi_{211}$ | 60 | 60 | -20 | 0 | 0 | 12 | -4 | 0 | -60 | 20 | -12 | 4 | 0 | 0 | -20 | 28 | 12 | -4 |
| $\chi_{212}$ | 60 | 60 | -20 | 0 | 0 | 12 | -4 | 0 | 60 | -20 | 12 | -4 | 0 | 0 | 28 | -20 | -4 | 12 |
| $\chi_{213}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{214}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{215}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{216}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{217}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | 42 | -30 | -6 | 18 |
| $\chi_{218}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | 42 | -30 | -6 | 18 |
| $\chi_{219}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | -30 | 42 | 18 | -6 |
| $\chi_{220}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | -30 | 42 | 18 | -6 |
| $\chi_{221}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | -30 | 42 | 18 | -6 |
| $\chi_{222}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | -30 | 42 | 18 | -6 |
| $\chi_{223}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | 42 | -30 | -6 | 18 |
| $\chi_{224}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | 42 | -30 | -6 | 18 |
| $\chi_{225}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{226}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{227}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{228}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{229}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{230}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{231}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{232}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{233}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{234}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | 90 | -30 | 18 | -6 | 0 | 0 | -6 | 18 | 10 | 2 |
| $\chi_{235}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{236}$ | 90 | 90 | -30 | 0 | 0 | 18 | -6 | 0 | -90 | 30 | -18 | 6 | 0 | 0 | 18 | -6 | 2 | 10 |
| $\chi_{237}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | 120 | -40 | 24 | -8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{238}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | 120 | -40 | 24 | -8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{239}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | -120 | 40 | -24 | 8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{240}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | -120 | 40 | -24 | 8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{241}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | -120 | 40 | -24 | 8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{242}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | -120 | 40 | -24 | 8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{243}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | 120 | -40 | 24 | -8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{244}$ | 120 | 120 | -40 | 0 | 0 | 24 | -8 | 0 | 120 | -40 | 24 | -8 | 0 | 0 | -8 | -8 | -8 | -8 |
| $\chi_{245}$ | 180 | 180 | -60 | 0 | 0 | 36 | -12 | 0 | 180 | -60 | 36 | -12 | 0 | 0 | -12 | 36 | 20 | 4 |
| $\chi_{246}$ | 180 | 180 | -60 | 0 | 0 | 36 | -12 | 0 | -180 | 60 | -36 | 12 | 0 | 0 | 36 | -12 | 4 | 20 |
| $\chi_{247}$ | 180 | 180 | -60 | 0 | 0 | 36 | -12 | 0 | -180 | 60 | -36 | 12 | 0 | 0 | 36 | -12 | 4 | 20 |
| $\chi_{248}$ | 180 | 180 | -60 | 0 | 0 | 36 | -12 | 0 | 180 | -60 | 36 | -12 | 0 | 0 | -12 | 36 | 20 | 4 |
| $\chi_{249}$ | 240 | 240 | -80 | 0 | 0 | 48 | -16 | 0 | 240 | -80 | 48 | -16 | 0 | 0 | -16 | -16 | -16 | -16 |
| $\chi_{250}$ | 240 | 240 | -80 | 0 | 0 | 48 | -16 | 0 | -240 | 80 | -48 | 16 | 0 | 0 | -16 | -16 | -16 | -16 |
| $\chi_{251}$ | 240 | 240 | -80 | 0 | 0 | 48 | -16 | 0 | -240 | 80 | -48 | 16 | 0 | 0 | -16 | -16 | -16 | -16 |
| $\chi_{252}$ | 240 | 240 | -80 | 0 | 0 | 48 | -16 | 0 | 240 | -80 | 48 | -16 | 0 | 0 | -16 | -16 | -16 | -16 |
| $\chi_{253}$ | 32 | -32 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 32 | -32 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 160 | -160 | 0 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 160 | -160 | 0 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 160 | -160 | 0 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 160 | -160 | 0 | 40 | -40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 288 | -288 | 0 | 72 | -72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 288 | -288 | 0 | 72 | -72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 320 | -320 | 0 | 80 | -80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 320 | -320 | 0 | 80 | -80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 512 | -512 | 0 | 128 | -128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 32 | -32 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 32 | -32 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 160 | -160 | 0 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 160 | -160 | 0 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 160 | -160 | 0 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 160 | -160 | 0 | -40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 288 | -288 | 0 | -72 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 288 | -288 | 0 | -72 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 320 | -320 | 0 | -80 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 320 | -320 | 0 | -80 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 512 | -512 | 0 | -128 | 128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2B$ | | | | $2C$ | | | | | | | | $2D$ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4D$ | $4E$ | $4F$ | $4G$ | $2O$ | $4H$ | $2P$ | $4I$ | $4J$ | $2Q$ | $4K$ | $4L$ | $2R$ | $4M$ | $4N$ | $2S$ | $4O$ | $4P$ |
| $\chi_{201}$ | -2 | -2 | 0 | 0 | 14 | -10 | -2 | 6 | -2 | -2 | 0 | 0 | 14 | -10 | 6 | -2 | 0 | 0 |
| $\chi_{202}$ | -2 | -2 | 0 | 0 | -10 | 14 | 6 | -2 | -2 | -2 | 0 | 0 | -12 | 12 | -4 | 4 | -2 | -2 |
| $\chi_{203}$ | -2 | -2 | 0 | 0 | -10 | 14 | 6 | -2 | -2 | -2 | 0 | 0 | 12 | -12 | 4 | -4 | 2 | 2 |
| $\chi_{204}$ | -2 | -2 | 0 | 0 | 14 | -10 | -2 | 6 | -2 | -2 | 0 | 0 | -14 | 10 | -6 | 2 | 0 | 0 |
| $\chi_{205}$ | -2 | -2 | 0 | 0 | 14 | -10 | -2 | 6 | -2 | -2 | 0 | 0 | -10 | 14 | -2 | 6 | 0 | 0 |
| $\chi_{206}$ | -2 | -2 | 0 | 0 | -10 | 14 | 6 | -2 | -2 | -2 | 0 | 0 | 12 | -12 | 4 | -4 | -2 | -2 |
| $\chi_{207}$ | -2 | -2 | 0 | 0 | -10 | 14 | 6 | -2 | -2 | -2 | 0 | 0 | -12 | 12 | -4 | 4 | 2 | 2 |
| $\chi_{208}$ | -2 | -2 | 0 | 0 | 14 | -10 | -2 | 6 | -2 | -2 | 0 | 0 | 10 | -14 | 2 | -6 | 0 | 0 |
| $\chi_{209}$ | -4 | -4 | 0 | 0 | 28 | -20 | -4 | 12 | -4 | -4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 |
| $\chi_{210}$ | -4 | -4 | 0 | 0 | -20 | 28 | 12 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 |
| $\chi_{211}$ | -4 | -4 | 0 | 0 | -20 | 28 | 12 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| $\chi_{212}$ | -4 | -4 | 0 | 0 | 28 | -20 | -4 | 12 | -4 | -4 | 0 | 0 | -4 | -4 | -4 | -4 | 0 | 0 |
| $\chi_{213}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | -12 | 12 | -4 | 4 | -6 | -6 |
| $\chi_{214}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | 12 | -12 | 4 | -4 | -6 | -6 |
| $\chi_{215}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | -18 | 6 | -10 | -2 | 0 | 0 |
| $\chi_{216}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | 6 | -18 | -2 | -10 | 0 | 0 |
| $\chi_{217}$ | -6 | -6 | 0 | 0 | 42 | -30 | -6 | 18 | -6 | -6 | 0 | 0 | 18 | -6 | 10 | 2 | 0 | 0 |
| $\chi_{218}$ | -6 | -6 | 0 | 0 | 42 | -30 | -6 | 18 | -6 | -6 | 0 | 0 | -6 | 18 | 2 | 10 | 0 | 0 |
| $\chi_{219}$ | -6 | -6 | 0 | 0 | -30 | 42 | 18 | -6 | -6 | -6 | 0 | 0 | 12 | -12 | 4 | -4 | 6 | 6 |
| $\chi_{220}$ | -6 | -6 | 0 | 0 | -30 | 42 | 18 | -6 | -6 | -6 | 0 | 0 | -12 | 12 | -4 | 4 | 6 | 6 |
| $\chi_{221}$ | -6 | -6 | 0 | 0 | -30 | 42 | 18 | -6 | -6 | -6 | 0 | 0 | -12 | 12 | -4 | 4 | -6 | -6 |
| $\chi_{222}$ | -6 | -6 | 0 | 0 | -30 | 42 | 18 | -6 | -6 | -6 | 0 | 0 | 12 | -12 | 4 | -4 | -6 | -6 |
| $\chi_{223}$ | -6 | -6 | 0 | 0 | 42 | -30 | -6 | 18 | -6 | -6 | 0 | 0 | -18 | 6 | -10 | -2 | 0 | 0 |
| $\chi_{224}$ | -6 | -6 | 0 | 0 | 42 | -30 | -6 | 18 | -6 | -6 | 0 | 0 | 6 | -18 | -2 | -10 | 0 | 0 |
| $\chi_{225}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | 18 | -6 | 10 | 2 | 0 | 0 |
| $\chi_{226}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | -6 | 18 | 2 | 10 | 0 | 0 |
| $\chi_{227}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | 12 | -12 | 4 | -4 | 6 | 6 |
| $\chi_{228}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | -12 | 12 | -4 | 4 | 6 | 6 |
| $\chi_{229}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | -12 | 12 | -4 | 4 | 6 | 6 |
| $\chi_{230}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | 12 | -12 | 4 | -4 | 6 | 6 |
| $\chi_{231}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | -6 | 18 | 2 | 10 | 0 | 0 |
| $\chi_{232}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | 18 | -6 | 10 | 2 | 0 | 0 |
| $\chi_{233}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | 6 | -18 | -2 | -10 | 0 | 0 |
| $\chi_{234}$ | -6 | -6 | 0 | 0 | 34 | -38 | -14 | 10 | 2 | 2 | 0 | 0 | -18 | 6 | -10 | -2 | 0 | 0 |
| $\chi_{235}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | 12 | -12 | 4 | -4 | -6 | -6 |
| $\chi_{236}$ | -6 | -6 | 0 | 0 | -38 | 34 | 10 | -14 | 2 | 2 | 0 | 0 | -12 | 12 | -4 | 4 | -6 | -6 |
| $\chi_{237}$ | 8 | 8 | 0 | 0 | -48 | 48 | 16 | -16 | 0 | 0 | 0 | 0 | -24 | 24 | -8 | 8 | 8 | 8 |
| $\chi_{238}$ | 8 | 8 | 0 | 0 | -48 | 48 | 16 | -16 | 0 | 0 | 0 | 0 | 24 | -24 | 8 | -8 | 8 | 8 |
| $\chi_{239}$ | 8 | 8 | 0 | 0 | 48 | -48 | -16 | 16 | 0 | 0 | 0 | 0 | 32 | -16 | 16 | 0 | 0 | 0 |
| $\chi_{240}$ | 8 | 8 | 0 | 0 | 48 | -48 | -16 | 16 | 0 | 0 | 0 | 0 | -16 | 32 | 0 | 16 | 0 | 0 |
| $\chi_{241}$ | 8 | 8 | 0 | 0 | 48 | -48 | -16 | 16 | 0 | 0 | 0 | 0 | 16 | -32 | 0 | -16 | 0 | 0 |
| $\chi_{242}$ | 8 | 8 | 0 | 0 | 48 | -48 | -16 | 16 | 0 | 0 | 0 | 0 | -32 | 16 | -16 | 0 | 0 | 0 |
| $\chi_{243}$ | 8 | 8 | 0 | 0 | -48 | 48 | 16 | -16 | 0 | 0 | 0 | 0 | -24 | 24 | -8 | 8 | -8 | -8 |
| $\chi_{244}$ | 8 | 8 | 0 | 0 | -48 | 48 | 16 | -16 | 0 | 0 | 0 | 0 | 24 | -24 | 8 | -8 | -8 | -8 |
| $\chi_{245}$ | -12 | -12 | 0 | 0 | 68 | -76 | -28 | 20 | 4 | 4 | 0 | 0 | 12 | 12 | 12 | 12 | 0 | 0 |
| $\chi_{246}$ | -12 | -12 | 0 | 0 | -76 | 68 | 20 | -28 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 |
| $\chi_{247}$ | -12 | -12 | 0 | 0 | -76 | 68 | 20 | -28 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | -12 | -12 |
| $\chi_{248}$ | -12 | -12 | 0 | 0 | 68 | -76 | -28 | 20 | 4 | 4 | 0 | 0 | -12 | -12 | -12 | -12 | 0 | 0 |
| $\chi_{249}$ | 16 | 16 | 0 | 0 | -96 | 96 | 32 | -32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 |
| $\chi_{250}$ | 16 | 16 | 0 | 0 | 96 | -96 | -32 | 32 | 0 | 0 | 0 | 0 | 16 | 16 | 16 | 16 | 0 | 0 |
| $\chi_{251}$ | 16 | 16 | 0 | 0 | 96 | -96 | -32 | 32 | 0 | 0 | 0 | 0 | -16 | -16 | -16 | -16 | 0 | 0 |
| $\chi_{252}$ | 16 | 16 | 0 | 0 | -96 | 96 | 32 | -32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | -16 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2D$ | | | | $2E$ | | | | | | | | | | | | $2F$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4Q$ | $4R$ | $4S$ | $2T$ | $2U$ | $2V$ | $4T$ | $4U$ | $4V$ | $4W$ | $2W$ | $4X$ | $2X$ | $4Y$ | $2Y$ | $2Z$ | $2AA$ | $4Z$ |
| $\chi_{201}$ | 0 | -2 | -2 | 0 | 14 | 14 | -10 | 0 | 0 | 6 | -2 | -2 | 0 | 0 | -2 | 0 | 6 | 0 |
| $\chi_{202}$ | 2 | 0 | 0 | 2 | 12 | 12 | -12 | -2 | -2 | 4 | -4 | 0 | 2 | 2 | 0 | -2 | 0 | 6 |
| $\chi_{203}$ | -2 | 0 | 0 | -2 | -12 | -12 | 12 | 2 | 2 | -4 | 4 | 0 | -2 | -2 | 0 | 2 | 0 | -6 |
| $\chi_{204}$ | 0 | 2 | 2 | 0 | -14 | -14 | 10 | 0 | 0 | -6 | 2 | 2 | 0 | 0 | 2 | 0 | -6 | 0 |
| $\chi_{205}$ | 0 | -2 | -2 | 0 | -10 | -10 | 14 | 0 | 0 | -2 | 6 | -2 | 0 | 0 | -2 | 0 | 6 | 0 |
| $\chi_{206}$ | 2 | 0 | 0 | 2 | -12 | -12 | 12 | -2 | -2 | -4 | 4 | 0 | 2 | 2 | 0 | -2 | 0 | 6 |
| $\chi_{207}$ | -2 | 0 | 0 | -2 | 12 | 12 | -12 | 2 | 2 | 4 | -4 | 0 | -2 | -2 | 0 | 2 | 0 | -6 |
| $\chi_{208}$ | 0 | 2 | 2 | 0 | 10 | 10 | -14 | 0 | 0 | 2 | -6 | 2 | 0 | 0 | 2 | 0 | -6 | 0 |
| $\chi_{209}$ | 0 | -4 | -4 | 0 | 4 | 4 | 4 | 0 | 0 | 4 | 4 | -4 | 0 | 0 | -4 | 0 | 12 | 0 |
| $\chi_{210}$ | 4 | 0 | 0 | 4 | 0 | 0 | 0 | -4 | -4 | 0 | 0 | 0 | 4 | 4 | 0 | -4 | 0 | 12 |
| $\chi_{211}$ | -4 | 0 | 0 | -4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | -4 | -4 | 0 | 4 | 0 | -12 |
| $\chi_{212}$ | 0 | 4 | 4 | 0 | -4 | -4 | -4 | 0 | 0 | -4 | -4 | 4 | 0 | 0 | 4 | 0 | -12 | 0 |
| $\chi_{213}$ | 6 | 0 | 0 | 6 | 12 | 12 | -12 | -6 | -6 | 4 | -4 | 0 | 6 | 6 | 0 | -6 | -12 | 6 |
| $\chi_{214}$ | 6 | 0 | 0 | 6 | -12 | -12 | 12 | -6 | -6 | -4 | 4 | 0 | 6 | 6 | 0 | -6 | -12 | 6 |
| $\chi_{215}$ | 0 | 6 | 6 | 0 | -18 | -18 | 6 | 0 | 0 | -10 | -2 | 6 | 0 | 0 | 6 | 0 | -6 | 12 |
| $\chi_{216}$ | 0 | 6 | 6 | 0 | 6 | 6 | -18 | 0 | 0 | -2 | -10 | 6 | 0 | 0 | 6 | 0 | -6 | 12 |
| $\chi_{217}$ | 0 | -6 | -6 | 0 | 18 | 18 | -6 | 0 | 0 | 10 | 2 | -6 | 0 | 0 | -6 | 0 | -6 | 0 |
| $\chi_{218}$ | 0 | -6 | -6 | 0 | -6 | -6 | 18 | 0 | 0 | 2 | 10 | -6 | 0 | 0 | -6 | 0 | -6 | 0 |
| $\chi_{219}$ | -6 | 0 | 0 | -6 | -12 | -12 | 12 | 6 | 6 | -4 | 4 | 0 | -6 | -6 | 0 | 6 | 0 | 6 |
| $\chi_{220}$ | -6 | 0 | 0 | -6 | 12 | 12 | -12 | 6 | 6 | 4 | -4 | 0 | -6 | -6 | 0 | 6 | 0 | 6 |
| $\chi_{221}$ | 6 | 0 | 0 | 6 | 12 | 12 | -12 | -6 | -6 | 4 | -4 | 0 | 6 | 6 | 0 | -6 | 0 | -6 |
| $\chi_{222}$ | 6 | 0 | 0 | 6 | -12 | -12 | 12 | -6 | -6 | -4 | 4 | 0 | 6 | 6 | 0 | -6 | 0 | -6 |
| $\chi_{223}$ | 0 | 6 | 6 | 0 | -18 | -18 | 6 | 0 | 0 | -10 | -2 | 6 | 0 | 0 | 6 | 0 | 6 | 0 |
| $\chi_{224}$ | 0 | 6 | 6 | 0 | 6 | 6 | -18 | 0 | 0 | -2 | -10 | 6 | 0 | 0 | 6 | 0 | 6 | 0 |
| $\chi_{225}$ | 0 | -6 | -6 | 0 | 18 | 18 | -6 | 0 | 0 | 10 | 2 | -6 | 0 | 0 | -6 | 0 | 6 | -12 |
| $\chi_{226}$ | 0 | -6 | -6 | 0 | -6 | -6 | 18 | 0 | 0 | 2 | 10 | -6 | 0 | 0 | -6 | 0 | 6 | -12 |
| $\chi_{227}$ | -6 | 0 | 0 | -6 | -12 | -12 | 12 | 6 | 6 | -4 | 4 | 0 | -6 | -6 | 0 | 6 | 12 | -6 |
| $\chi_{228}$ | -6 | 0 | 0 | -6 | 12 | 12 | -12 | 6 | 6 | 4 | -4 | 0 | -6 | -6 | 0 | 6 | 12 | -6 |
| $\chi_{229}$ | -6 | 0 | 0 | -6 | 12 | 12 | -12 | 6 | 6 | 4 | -4 | 0 | -6 | -6 | 0 | 6 | -12 | -6 |
| $\chi_{230}$ | -6 | 0 | 0 | -6 | -12 | -12 | 12 | 6 | 6 | -4 | 4 | 0 | -6 | -6 | 0 | 6 | -12 | -6 |
| $\chi_{231}$ | 0 | -6 | -6 | 0 | -6 | -6 | 18 | 0 | 0 | 2 | 10 | -6 | 0 | 0 | -6 | 0 | 6 | 12 |
| $\chi_{232}$ | 0 | -6 | -6 | 0 | 18 | 18 | -6 | 0 | 0 | 10 | 2 | -6 | 0 | 0 | -6 | 0 | 6 | 12 |
| $\chi_{233}$ | 0 | 6 | 6 | 0 | 6 | 6 | -18 | 0 | 0 | -2 | -10 | 6 | 0 | 0 | 6 | 0 | -6 | -12 |
| $\chi_{234}$ | 0 | 6 | 6 | 0 | -18 | -18 | 6 | 0 | 0 | -10 | -2 | 6 | 0 | 0 | 6 | 0 | -6 | -12 |
| $\chi_{235}$ | 6 | 0 | 0 | 6 | -12 | -12 | 12 | -6 | -6 | -4 | 4 | 0 | 6 | 6 | 0 | -6 | 12 | 6 |
| $\chi_{236}$ | 6 | 0 | 0 | 6 | 12 | 12 | -12 | -6 | -6 | 4 | -4 | 0 | 6 | 6 | 0 | -6 | 12 | 6 |
| $\chi_{237}$ | -8 | 0 | 0 | -8 | -24 | -24 | 24 | -8 | -8 | -8 | 8 | 0 | 8 | 8 | 0 | -8 | 0 | 0 |
| $\chi_{238}$ | -8 | 0 | 0 | -8 | 24 | 24 | -24 | -8 | -8 | 8 | -8 | 0 | 8 | 8 | 0 | -8 | 0 | 0 |
| $\chi_{239}$ | 0 | -8 | -8 | 0 | -32 | -32 | 16 | 0 | 0 | -16 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | -8 | -8 | 0 | 16 | 16 | -32 | 0 | 0 | 0 | -16 | 8 | 0 | 0 | 8 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 8 | 8 | 0 | -16 | -16 | 32 | 0 | 0 | 0 | 16 | -8 | 0 | 0 | -8 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 8 | 8 | 0 | 32 | 32 | -16 | 0 | 0 | 16 | 0 | -8 | 0 | 0 | -8 | 0 | 0 | 0 |
| $\chi_{243}$ | 8 | 0 | 0 | 8 | -24 | -24 | 24 | 8 | 8 | -8 | 8 | 0 | -8 | -8 | 0 | 8 | 0 | 0 |
| $\chi_{244}$ | 8 | 0 | 0 | 8 | 24 | 24 | -24 | 8 | 8 | 8 | -8 | 0 | -8 | -8 | 0 | 8 | 0 | 0 |
| $\chi_{245}$ | 0 | -12 | -12 | 0 | 12 | 12 | 12 | 0 | 0 | 12 | 12 | -12 | 0 | 0 | -12 | 0 | -12 | 0 |
| $\chi_{246}$ | -12 | 0 | 0 | -12 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | -12 | -12 | 0 | 12 | 0 | 12 |
| $\chi_{247}$ | 12 | 0 | 0 | 12 | 0 | 0 | 0 | -12 | -12 | 0 | 0 | 0 | 12 | 12 | 0 | -12 | 0 | -12 |
| $\chi_{248}$ | 0 | 12 | 12 | 0 | -12 | -12 | -12 | 0 | 0 | -12 | -12 | 12 | 0 | 0 | 12 | 0 | 12 | 0 |
| $\chi_{249}$ | -16 | 0 | 0 | -16 | 0 | 0 | 0 | -16 | -16 | 0 | 0 | 0 | 16 | 16 | 0 | -16 | 0 | 0 |
| $\chi_{250}$ | 0 | -16 | -16 | 0 | -16 | -16 | -16 | 0 | 0 | -16 | -16 | 16 | 0 | 0 | 16 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 16 | 16 | 0 | 16 | 16 | 16 | 0 | 0 | 16 | 16 | -16 | 0 | 0 | -16 | 0 | 0 | 0 |
| $\chi_{252}$ | 16 | 0 | 0 | 16 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | -16 | -16 | 0 | 16 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 16 | -16 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | -16 | 16 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 16 | -16 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | -16 | 16 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 48 | -48 | 0 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | -48 | 48 | 0 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | -48 | 48 | 0 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 48 | -48 | 0 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 32 | -32 | 0 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | -32 | 32 | 0 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 16 | -16 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | -16 | 16 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 16 | -16 | 0 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | -16 | 16 | 0 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 48 | -48 | 0 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | -48 | 48 | 0 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | -48 | 48 | 0 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 48 | -48 | 0 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 32 | -32 | 0 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | -32 | 32 | 0 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2F$ | | | | | | $2G$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AB$ | $4AA$ | $4AB$ | $4AC$ | $4AD$ | $4AE$ | $2AC$ | $2AD$ | $2AE$ | $2AF$ | $2AG$ | $2AH$ | $4AF$ | $4AG$ | $4AH$ | $4AI$ |
| $\chi_{201}$ | 0 | 6 | 0 | -2 | 0 | -2 | 6 | 6 | 0 | 0 | 0 | 6 | 0 | -2 | 0 | -2 |
| $\chi_{202}$ | 6 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{203}$ | -6 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{204}$ | 0 | -6 | 0 | 2 | 0 | 2 | -6 | -6 | 0 | 0 | 0 | -6 | 0 | 2 | 0 | 2 |
| $\chi_{205}$ | 0 | 6 | 0 | -2 | 0 | -2 | 6 | 6 | 0 | 0 | 0 | 6 | 0 | -2 | 0 | -2 |
| $\chi_{206}$ | 6 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{207}$ | -6 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{208}$ | 0 | -6 | 0 | 2 | 0 | 2 | -6 | -6 | 0 | 0 | 0 | -6 | 0 | 2 | 0 | 2 |
| $\chi_{209}$ | 0 | 12 | 0 | -4 | 0 | -4 | 12 | 12 | 0 | 0 | 0 | 12 | 0 | -4 | 0 | -4 |
| $\chi_{210}$ | 12 | 0 | -4 | 0 | -4 | 0 | 0 | 0 | -12 | -12 | -12 | 0 | 4 | 0 | 4 | 0 |
| $\chi_{211}$ | -12 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 12 | 12 | 12 | 0 | -4 | 0 | -4 | 0 |
| $\chi_{212}$ | 0 | -12 | 0 | 4 | 0 | 4 | -12 | -12 | 0 | 0 | 0 | -12 | 0 | 4 | 0 | 4 |
| $\chi_{213}$ | 6 | -12 | -2 | 4 | -2 | 4 | 12 | 12 | -6 | -6 | -6 | 12 | 2 | -4 | 2 | -4 |
| $\chi_{214}$ | 6 | -12 | -2 | 4 | -2 | 4 | 12 | 12 | -6 | -6 | -6 | 12 | 2 | -4 | 2 | -4 |
| $\chi_{215}$ | 12 | -6 | -4 | 2 | -4 | 2 | -6 | -6 | 12 | 12 | 12 | -6 | -4 | 2 | -4 | 2 |
| $\chi_{216}$ | 12 | -6 | -4 | 2 | -4 | 2 | -6 | -6 | 12 | 12 | 12 | -6 | -4 | 2 | -4 | 2 |
| $\chi_{217}$ | 0 | -6 | 0 | 2 | 0 | 2 | -6 | -6 | 0 | 0 | 0 | -6 | 0 | 2 | 0 | 2 |
| $\chi_{218}$ | 0 | -6 | 0 | 2 | 0 | 2 | -6 | -6 | 0 | 0 | 0 | -6 | 0 | 2 | 0 | 2 |
| $\chi_{219}$ | 6 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{220}$ | 6 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | -6 | -6 | -6 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{221}$ | -6 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{222}$ | -6 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 6 | 6 | 6 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{223}$ | 0 | 6 | 0 | -2 | 0 | -2 | 6 | 6 | 0 | 0 | 0 | 6 | 0 | -2 | 0 | -2 |
| $\chi_{224}$ | 0 | 6 | 0 | -2 | 0 | -2 | 6 | 6 | 0 | 0 | 0 | 6 | 0 | -2 | 0 | -2 |
| $\chi_{225}$ | -12 | 6 | 4 | -2 | 4 | -2 | 6 | 6 | -12 | -12 | -12 | 6 | 4 | -2 | 4 | -2 |
| $\chi_{226}$ | -12 | 6 | 4 | -2 | 4 | -2 | 6 | 6 | -12 | -12 | -12 | 6 | 4 | -2 | 4 | -2 |
| $\chi_{227}$ | -6 | 12 | 2 | -4 | 2 | -4 | -12 | -12 | 6 | 6 | 6 | -12 | -2 | 4 | -2 | 4 |
| $\chi_{228}$ | -6 | 12 | 2 | -4 | 2 | -4 | -12 | -12 | 6 | 6 | 6 | -12 | -2 | 4 | -2 | 4 |
| $\chi_{229}$ | -6 | -12 | 2 | 4 | 2 | 4 | 12 | 12 | 6 | 6 | 6 | 12 | -2 | -4 | -2 | -4 |
| $\chi_{230}$ | -6 | -12 | 2 | 4 | 2 | 4 | 12 | 12 | 6 | 6 | 6 | 12 | -2 | -4 | -2 | -4 |
| $\chi_{231}$ | 12 | 6 | -4 | -2 | -4 | -2 | 6 | 6 | 12 | 12 | 12 | 6 | -4 | -2 | -4 | -2 |
| $\chi_{232}$ | 12 | 6 | -4 | -2 | -4 | -2 | 6 | 6 | 12 | 12 | 12 | 6 | -4 | -2 | -4 | -2 |
| $\chi_{233}$ | -12 | -6 | 4 | 2 | 4 | 2 | -6 | -6 | -12 | -12 | -12 | -6 | 4 | 2 | 4 | 2 |
| $\chi_{234}$ | -12 | -6 | 4 | 2 | 4 | 2 | -6 | -6 | -12 | -12 | -12 | -6 | 4 | 2 | 4 | 2 |
| $\chi_{235}$ | 6 | 12 | -2 | -4 | -2 | -4 | -12 | -12 | -6 | -6 | -6 | -12 | 2 | 4 | 2 | 4 |
| $\chi_{236}$ | 6 | 12 | -2 | -4 | -2 | -4 | -12 | -12 | -6 | -6 | -6 | -12 | 2 | 4 | 2 | 4 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | -12 | 0 | 4 | 0 | 4 | -12 | -12 | 0 | 0 | 0 | -12 | 0 | 4 | 0 | 4 |
| $\chi_{246}$ | 12 | 0 | -4 | 0 | -4 | 0 | 0 | 0 | -12 | -12 | -12 | 0 | 4 | 0 | 4 | 0 |
| $\chi_{247}$ | -12 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 12 | 12 | 12 | 0 | -4 | 0 | -4 | 0 |
| $\chi_{248}$ | 0 | 12 | 0 | -4 | 0 | -4 | 12 | 12 | 0 | 0 | 0 | 12 | 0 | -4 | 0 | -4 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | -24 | 24 | 24 | -24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | -24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | -16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $2H$ | | | | | | | | | | | | $2I$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $2AI$ | $4AJ$ | $4AK$ | $4AL$ | $4AM$ | $4AN$ | $2AJ$ | $4AO$ | $4AP$ | $4AQ$ | $4AR$ | $4AS$ | $2AK$ | $4AT$ | $4AU$ | $4AV$ |
| $\chi_{201}$ | 6 | 0 | -2 | 6 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 6 | 0 | -2 | 6 |
| $\chi_{202}$ | -2 | -4 | -2 | -2 | 4 | 4 | -4 | -2 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| $\chi_{203}$ | -2 | -4 | -2 | -2 | 4 | 4 | -4 | -2 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{204}$ | 6 | 0 | -2 | 6 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | -6 | 0 | 2 | -6 |
| $\chi_{205}$ | -2 | 0 | 6 | -2 | 0 | 0 | 0 | 6 | 0 | 0 | -2 | -2 | -2 | 0 | 6 | -2 |
| $\chi_{206}$ | -2 | 4 | -2 | -2 | -4 | -4 | 4 | -2 | 0 | 0 | 2 | 2 | 0 | -6 | 0 | 0 |
| $\chi_{207}$ | -2 | 4 | -2 | -2 | -4 | -4 | 4 | -2 | 0 | 0 | 2 | 2 | 0 | 6 | 0 | 0 |
| $\chi_{208}$ | -2 | 0 | 6 | -2 | 0 | 0 | 0 | 6 | 0 | 0 | -2 | -2 | 2 | 0 | -6 | 2 |
| $\chi_{209}$ | 4 | 0 | 4 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | -4 | 4 | 0 | 4 | 4 |
| $\chi_{210}$ | -4 | 0 | -4 | -4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | 4 | 0 | -4 | 0 | 0 |
| $\chi_{211}$ | -4 | 0 | -4 | -4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | 4 | 0 | 4 | 0 | 0 |
| $\chi_{212}$ | 4 | 0 | 4 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | -4 | -4 | 0 | -4 | -4 |
| $\chi_{213}$ | -2 | -8 | -2 | -2 | 0 | 0 | -8 | -2 | 4 | 4 | 2 | 2 | 0 | 6 | 0 | 0 |
| $\chi_{214}$ | -2 | 0 | -2 | -2 | -8 | -8 | 0 | -2 | 4 | 4 | 2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{215}$ | 6 | 4 | -2 | 6 | 4 | 4 | 4 | -2 | -4 | -4 | -2 | -2 | -2 | 0 | 6 | -2 |
| $\chi_{216}$ | -2 | 4 | 6 | -2 | 4 | 4 | 4 | 6 | -4 | -4 | -2 | -2 | 6 | 0 | -2 | 6 |
| $\chi_{217}$ | 2 | 0 | -6 | 2 | 0 | 0 | 0 | -6 | 0 | 0 | 2 | 2 | 10 | 0 | 2 | 10 |
| $\chi_{218}$ | -6 | 0 | 2 | -6 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 2 | 0 | 10 | 2 |
| $\chi_{219}$ | 2 | -4 | 2 | 2 | 4 | 4 | -4 | 2 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{220}$ | 2 | 4 | 2 | 2 | -4 | -4 | 4 | 2 | 0 | 0 | -2 | -2 | 0 | 10 | 0 | 0 |
| $\chi_{221}$ | 2 | -4 | 2 | 2 | 4 | 4 | -4 | 2 | 0 | 0 | -2 | -2 | 0 | -2 | 0 | 0 |
| $\chi_{222}$ | 2 | 4 | 2 | 2 | -4 | -4 | 4 | 2 | 0 | 0 | -2 | -2 | 0 | -10 | 0 | 0 |
| $\chi_{223}$ | 2 | 0 | -6 | 2 | 0 | 0 | 0 | -6 | 0 | 0 | 2 | 2 | -10 | 0 | -2 | -10 |
| $\chi_{224}$ | -6 | 0 | 2 | -6 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | 0 | -10 | -2 |
| $\chi_{225}$ | 6 | 4 | -2 | 6 | 4 | 4 | 4 | -2 | -4 | -4 | -2 | -2 | 2 | 0 | -6 | 2 |
| $\chi_{226}$ | -2 | 4 | 6 | -2 | 4 | 4 | 4 | 6 | -4 | -4 | -2 | -2 | -6 | 0 | 2 | -6 |
| $\chi_{227}$ | -2 | -8 | -2 | -2 | 0 | 0 | -8 | -2 | 4 | 4 | 2 | 2 | 0 | -6 | 0 | 0 |
| $\chi_{228}$ | -2 | 0 | -2 | -2 | -8 | -8 | 0 | -2 | 4 | 4 | 2 | 2 | 0 | 2 | 0 | 0 |
| $\chi_{229}$ | -2 | 8 | -2 | -2 | 0 | 0 | 8 | -2 | -4 | -4 | 2 | 2 | 0 | 2 | 0 | 0 |
| $\chi_{230}$ | -2 | 0 | -2 | -2 | 8 | 8 | 0 | -2 | -4 | -4 | 2 | 2 | 0 | -6 | 0 | 0 |
| $\chi_{231}$ | -2 | -4 | 6 | -2 | -4 | -4 | -4 | 6 | 4 | 4 | -2 | -2 | -6 | 0 | 2 | -6 |
| $\chi_{232}$ | 6 | -4 | -2 | 6 | -4 | -4 | -4 | -2 | 4 | 4 | -2 | -2 | 2 | 0 | -6 | 2 |
| $\chi_{233}$ | -2 | -4 | 6 | -2 | -4 | -4 | -4 | 6 | 4 | 4 | -2 | -2 | 6 | 0 | -2 | 6 |
| $\chi_{234}$ | 6 | -4 | -2 | 6 | -4 | -4 | -4 | -2 | 4 | 4 | -2 | -2 | -2 | 0 | 6 | -2 |
| $\chi_{235}$ | -2 | 8 | -2 | -2 | 0 | 0 | 8 | -2 | -4 | -4 | 2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{236}$ | -2 | 0 | -2 | -2 | 8 | 8 | 0 | -2 | -4 | -4 | 2 | 2 | 0 | 6 | 0 | 0 |
| $\chi_{237}$ | 0 | -8 | 0 | 0 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | -8 | 8 |
| $\chi_{238}$ | 0 | 8 | 0 | 0 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 8 | -8 |
| $\chi_{239}$ | -8 | 0 | 8 | -8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 |
| $\chi_{240}$ | 8 | 0 | -8 | 8 | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 0 |
| $\chi_{241}$ | 8 | 0 | -8 | 8 | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 |
| $\chi_{242}$ | -8 | 0 | 8 | -8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 0 |
| $\chi_{243}$ | 0 | 8 | 0 | 0 | -8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | -8 | 8 |
| $\chi_{244}$ | 0 | -8 | 0 | 0 | 8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | 8 | -8 |
| $\chi_{245}$ | -4 | 0 | -4 | -4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | 4 | -4 | 0 | -4 | -4 |
| $\chi_{246}$ | 4 | 0 | 4 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | -4 | 0 | -4 | 0 | 0 |
| $\chi_{247}$ | 4 | 0 | 4 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | -4 | -4 | 0 | 4 | 0 | 0 |
| $\chi_{248}$ | -4 | 0 | -4 | -4 | 0 | 0 | 0 | -4 | 0 | 0 | 4 | 4 | 4 | 0 | 4 | 4 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | | | | $2I$ | | | | | | | | $2J$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4AW$ | $2AL$ | $4AX$ | $4AY$ | $4AZ$ | $4BA$ | $4BB$ | $4BC$ | $2AM$ | $2AN$ | $4BD$ | $4BE$ | $4BF$ | $4BG$ | $2AO$ | $4BH$ |
| $\chi_{201}$ | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 6 | 6 | 0 | 0 | -2 | 6 | 0 | 0 |
| $\chi_{202}$ | -6 | 2 | -6 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 4 | 4 | 2 | 2 | -4 | -4 |
| $\chi_{203}$ | 6 | -2 | 6 | 0 | -2 | -2 | 0 | 0 | 2 | 2 | 4 | 4 | 2 | 2 | -4 | -4 |
| $\chi_{204}$ | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 6 | 6 | 0 | 0 | -2 | 6 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 6 | 0 | 0 | -2 | -2 | -2 | -2 | 0 | 0 | 6 | -2 | 0 | 0 |
| $\chi_{206}$ | 2 | -6 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | -4 | -4 | 2 | 2 | 4 | 4 |
| $\chi_{207}$ | -2 | 6 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 2 | -4 | -4 | 2 | 2 | 4 | 4 |
| $\chi_{208}$ | 0 | 0 | 0 | -6 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 6 | -2 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 4 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 |
| $\chi_{210}$ | -4 | -4 | -4 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 |
| $\chi_{211}$ | 4 | 4 | 4 | 0 | -4 | -4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | -4 | 0 | 0 | 4 | 4 | 4 | 4 | 0 | 0 | 4 | 4 | 0 | 0 |
| $\chi_{213}$ | -2 | 6 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 2 | 8 | 8 | 2 | 2 | 0 | 0 |
| $\chi_{214}$ | 6 | -2 | 6 | 0 | -2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 8 | 8 |
| $\chi_{215}$ | 0 | 0 | 0 | 6 | 0 | 0 | -2 | -2 | 6 | 6 | 4 | 4 | -2 | 6 | 4 | 4 |
| $\chi_{216}$ | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | 4 | 4 | 6 | -2 | 4 | 4 |
| $\chi_{217}$ | 0 | 0 | 0 | 2 | 0 | 0 | -6 | -6 | 2 | 2 | 0 | 0 | -6 | 2 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 10 | 0 | 0 | -6 | -6 | -6 | -6 | 0 | 0 | 2 | -6 | 0 | 0 |
| $\chi_{219}$ | 10 | 2 | 10 | 0 | -6 | -6 | 0 | 0 | -2 | -2 | 4 | 4 | -2 | -2 | -4 | -4 |
| $\chi_{220}$ | 2 | 10 | 2 | 0 | -6 | -6 | 0 | 0 | -2 | -2 | -4 | -4 | -2 | -2 | 4 | 4 |
| $\chi_{221}$ | -10 | -2 | -10 | 0 | 6 | 6 | 0 | 0 | -2 | -2 | 4 | 4 | -2 | -2 | -4 | -4 |
| $\chi_{222}$ | -2 | -10 | -2 | 0 | 6 | 6 | 0 | 0 | -2 | -2 | -4 | -4 | -2 | -2 | 4 | 4 |
| $\chi_{223}$ | 0 | 0 | 0 | -2 | 0 | 0 | 6 | 6 | 2 | 2 | 0 | 0 | -6 | 2 | 0 | 0 |
| $\chi_{224}$ | 0 | 0 | 0 | -10 | 0 | 0 | 6 | 6 | -6 | -6 | 0 | 0 | 2 | -6 | 0 | 0 |
| $\chi_{225}$ | 0 | 0 | 0 | -6 | 0 | 0 | 2 | 2 | 6 | 6 | 4 | 4 | -2 | 6 | 4 | 4 |
| $\chi_{226}$ | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 4 | 4 | 6 | -2 | 4 | 4 |
| $\chi_{227}$ | 2 | -6 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 8 | 8 | 2 | 2 | 0 | 0 |
| $\chi_{228}$ | -6 | 2 | -6 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 8 | 8 |
| $\chi_{229}$ | -6 | 2 | -6 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | -8 | -8 | 2 | 2 | 0 | 0 |
| $\chi_{230}$ | 2 | -6 | 2 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | -8 | -8 |
| $\chi_{231}$ | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | -4 | -4 | 6 | -2 | -4 | -4 |
| $\chi_{232}$ | 0 | 0 | 0 | -6 | 0 | 0 | 2 | 2 | 6 | 6 | -4 | -4 | -2 | 6 | -4 | -4 |
| $\chi_{233}$ | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | -2 | -2 | -4 | -4 | 6 | -2 | -4 | -4 |
| $\chi_{234}$ | 0 | 0 | 0 | 6 | 0 | 0 | -2 | -2 | 6 | 6 | -4 | -4 | -2 | 6 | -4 | -4 |
| $\chi_{235}$ | 6 | -2 | 6 | 0 | -2 | -2 | 0 | 0 | 2 | 2 | -8 | -8 | 2 | 2 | 0 | 0 |
| $\chi_{236}$ | -2 | 6 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | -8 | -8 |
| $\chi_{237}$ | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | 8 |
| $\chi_{238}$ | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | -8 |
| $\chi_{239}$ | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | 8 | 0 | 0 |
| $\chi_{240}$ | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{241}$ | -8 | 8 | -8 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | -8 | 0 | 0 |
| $\chi_{242}$ | 8 | -8 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | 8 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | -8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | -8 | -8 |
| $\chi_{244}$ | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | -8 | 0 | 0 | 8 | 8 |
| $\chi_{245}$ | 0 | 0 | 0 | -4 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{246}$ | -4 | -4 | -4 | 0 | 4 | 4 | 0 | 0 | -4 | -4 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{247}$ | 4 | 4 | 4 | 0 | -4 | -4 | 0 | 0 | -4 | -4 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 4 | 0 | 0 | -4 | -4 | -4 | -4 | 0 | 0 | -4 | -4 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 8 | -8 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | -16 | 16 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | -16 | 16 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | -8 | 8 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 16 | -16 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 2J | | | | | | 3A | | | | | | | | 3B | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2AP | 2AQ | 4BI | 4BJ | 4BK | 4BL | 3A | 6A | 6B | 6C | 6D | 6E | 6F | 6G | 3B | 6H | 6I | 6J | 6K | 6L |
| $\chi_{201}$ | 0 | -2 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 4 | 2 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 4 | 2 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | -2 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | -4 | 2 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | -4 | 2 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 6 | -2 | -2 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 4 | -4 | -4 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 4 | -4 | -4 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 4 | -4 | -4 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 4 | -4 | -4 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 8 | 2 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 2 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 4 | -2 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 4 | 6 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 4 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{220}$ | -4 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{221}$ | 4 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{222}$ | -4 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{223}$ | 0 | -6 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{224}$ | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{225}$ | 4 | -2 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{226}$ | 4 | 6 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{227}$ | 8 | 2 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{228}$ | 0 | 2 | -2 | -2 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{229}$ | -8 | 2 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{230}$ | 0 | 2 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{231}$ | -4 | 6 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{232}$ | -4 | -2 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{233}$ | -4 | 6 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{234}$ | -4 | -2 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{235}$ | -8 | 2 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{236}$ | 0 | 2 | -2 | -2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{237}$ | -8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | -8 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 8 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 8 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | -8 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | -8 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | -6 | 0 | 0 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | -6 | -6 | 6 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | -4 | 4 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | -4 | 4 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 0 | 4 | -4 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 0 | 4 | -4 | 0 | 0 | 0 | 4 | -4 | -4 | 4 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 0 | -8 | 8 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 0 | -8 | 8 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | -4 | 4 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | -4 | 4 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 0 | 8 | -8 | 0 | 0 | 0 | -4 | 4 | 4 | -4 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 4 | -4 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 4 | -4 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 0 | -4 | 4 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 8 | 0 | -4 | 4 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 0 | 8 | -8 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 0 | 8 | -8 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 4 | -4 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 | -8 | 0 | 4 | -4 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | -16 | 16 | 0 | -8 | 8 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | 4A | | | | | | 4B | | | | | | 4C | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4BM$ | $4BN$ | $4BO$ | $4BP$ | $8A$ | $8B$ | $4BQ$ | $4BR$ | $4BS$ | $4BT$ | $8C$ | $8D$ | $4BU$ | $4BV$ | $4BW$ | $4BX$ | $4BY$ | $4BZ$ |
| $\chi_{201}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{202}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{203}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{204}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{205}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{206}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{207}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{208}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{213}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{214}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{215}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{216}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{217}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{218}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{219}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{220}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{221}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{222}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{223}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{224}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{225}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{226}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{227}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{228}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{229}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{230}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{231}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{232}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{233}$ | -6 | 6 | 2 | -2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{234}$ | 6 | -6 | -2 | 2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 |
| $\chi_{235}$ | -6 | 6 | 2 | -2 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{236}$ | 6 | -6 | -2 | 2 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $4D$ | | | | | | $4E$ | | | | | | | | $4F$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4CA$ | $4CB$ | $4CC$ | $4CD$ | $4CE$ | $4CF$ | $4CG$ | $4CH$ | $4CI$ | $4CJ$ | $4CK$ | $4CL$ | $4CM$ | $4CN$ | $4CO$ | $8E$ | $4CP$ | $8F$ |
| $\chi_{201}$ | 2 | -2 | 2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 2 | 0 | 2 | 0 |
| $\chi_{202}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{203}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{204}$ | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | -2 | 0 | -2 | 0 |
| $\chi_{205}$ | 2 | -2 | 2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | -2 | 0 | -2 | 0 |
| $\chi_{206}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{207}$ | 2 | -2 | 2 | -2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{208}$ | 2 | -2 | 2 | -2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 2 | 0 |
| $\chi_{209}$ | 4 | -4 | 4 | -4 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 4 | 0 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | -4 | 0 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 4 | -4 | 4 | -4 | 0 | 0 | -4 | 0 | -4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| $\chi_{214}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 |
| $\chi_{215}$ | -2 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 2 |
| $\chi_{216}$ | -2 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | -2 | 0 | -2 |
| $\chi_{217}$ | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | -2 | 0 | -2 | 0 |
| $\chi_{218}$ | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 2 | 0 |
| $\chi_{219}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{220}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{221}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 |
| $\chi_{222}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 |
| $\chi_{223}$ | -2 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 2 | 0 | 2 | 0 |
| $\chi_{224}$ | -2 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | -2 | 0 | -2 | 0 |
| $\chi_{225}$ | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | -2 |
| $\chi_{226}$ | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 2 |
| $\chi_{227}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | 0 | -2 | 0 | -2 |
| $\chi_{228}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | 0 | 2 | 0 | 2 |
| $\chi_{229}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | 0 | -2 | 0 | -2 |
| $\chi_{230}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | -2 | -2 | 0 | 0 | 0 | 2 | 0 | 2 |
| $\chi_{231}$ | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | -2 | 0 | -2 |
| $\chi_{232}$ | -2 | 2 | -2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 2 |
| $\chi_{233}$ | -2 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 2 | 0 | 2 |
| $\chi_{234}$ | -2 | 2 | -2 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | -2 | 0 | -2 |
| $\chi_{235}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| $\chi_{236}$ | -2 | 2 | -2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 | 2 | 2 | 0 | 0 | 0 | -2 | 0 | -2 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 4 | -4 | 4 | -4 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | -4 | 0 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 4 | 0 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 4 | -4 | 4 | -4 | 0 | 0 | -4 | 0 | -4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | | $4F$ | | | | | $4G$ | | | | | | | | $4H$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8G$ | $8H$ | $4CQ$ | $4CR$ | $4CS$ | $8I$ | $8J$ | $4CT$ | $8K$ | $4CU$ | $8L$ | $4CV$ | $4CW$ | $8M$ | $4CX$ | $8N$ | $4CY$ | $4CZ$ |
| $\chi_{201}$ | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{202}$ | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{203}$ | -2 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{204}$ | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{205}$ | 2 | 2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{206}$ | -2 | -2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{207}$ | 2 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{208}$ | -2 | -2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | -2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{214}$ | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{215}$ | 0 | 0 | -2 | -2 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{216}$ | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{217}$ | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{218}$ | -2 | -2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{219}$ | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{220}$ | -2 | -2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{221}$ | -2 | -2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{222}$ | 2 | 2 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{223}$ | -2 | -2 | 0 | 0 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{224}$ | 2 | 2 | 0 | 0 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{225}$ | 0 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{226}$ | 0 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{227}$ | 0 | 0 | 2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{228}$ | 0 | 0 | -2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{229}$ | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{230}$ | 0 | 0 | -2 | -2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{231}$ | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{232}$ | 0 | 0 | -2 | -2 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{233}$ | 0 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | -2 | 0 | 0 | 0 | 2 |
| $\chi_{234}$ | 0 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | -2 |
| $\chi_{235}$ | 0 | 0 | -2 | -2 | 0 | 2 | 2 | 0 | 0 | -2 | 0 | -2 | -2 | 0 | 2 | 2 | -2 | 0 |
| $\chi_{236}$ | 0 | 0 | 2 | 2 | 0 | -2 | -2 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | -2 | -2 | 2 | 0 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | $4H$ | | | | | | $4I$ | | | | | | | | | $4J$ | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8O$ | $8P$ | $4DA$ | $4DB$ | $4DC$ | $4DD$ | $4DE$ | $8Q$ | $8R$ | $4DF$ | $8S$ | $8T$ | $4DG$ | $4DH$ | $4DI$ | $4DJ$ | $4DK$ | $8U$ | $8V$ | $8W$ |
| $\chi_{201}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{202}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{203}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{204}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{205}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{206}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{207}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{208}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{214}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{215}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{216}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{217}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{218}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{219}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{220}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{221}$ | -2 | 2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{222}$ | 2 | -2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{223}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 |
| $\chi_{224}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 |
| $\chi_{225}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{226}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{227}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{228}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{229}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{230}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{231}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{232}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{233}$ | -2 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{234}$ | 2 | -2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | 2 | 2 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{235}$ | 0 | 0 | 2 | 0 | 0 | 2 | 2 | -2 | -2 | 0 | 0 | 0 | 0 | -2 | -2 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{236}$ | 0 | 0 | -2 | 0 | 0 | -2 | -2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 4 | 4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 | 4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 4 | -4 | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 | -4 | 4 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | | $4H$ | | | | $5A$ | | | | | | $6A$ | | | | | $6B$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $4DL$ | $8X$ | $5A$ | $10A$ | $10B$ | $10C$ | $10D$ | $10E$ | $6M$ | $12A$ | $6N$ | $12B$ | $12C$ | $6O$ | $6P$ | $12D$ |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 |
| $\chi_{213}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{220}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{221}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{222}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{223}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{224}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{225}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{226}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{227}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{228}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{229}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{230}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{231}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{232}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{233}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{234}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{235}$ | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{236}$ | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | -2 | 2 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | -2 | 2 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | -6 | -2 | 2 | 0 | 0 | 2 | -2 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -6 | 6 | 2 | -2 | 0 | 0 | 2 | -2 |
| $\chi_{253}$ | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6B$ | | | | $6C$ | | | | | | $6D$ | | | | $6E$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6Q$ | $12E$ | $12F$ | $12G$ | $6R$ | $12H$ | $12I$ | $6S$ | $12J$ | $12K$ | $6T$ | $12L$ | $6U$ | $12M$ | $6V$ | $12N$ |
| $\chi_{201}$ | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{202}$ | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{203}$ | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{204}$ | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{205}$ | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{206}$ | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{207}$ | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{208}$ | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{209}$ | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{210}$ | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{211}$ | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{212}$ | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{220}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{221}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{222}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{223}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{224}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{225}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{226}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{227}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{228}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{229}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{230}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{231}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{232}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{233}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{234}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{235}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{236}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{237}$ | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{238}$ | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{239}$ | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{240}$ | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{241}$ | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{242}$ | -2 | 2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{243}$ | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{244}$ | -2 | 2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 |
| $\chi_{250}$ | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| $\chi_{251}$ | 2 | -2 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 0 |
| $\chi_{252}$ | 2 | -2 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 4 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | -4 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | -4 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6E$ | | | | | | | | $6F$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6W$ | $12O$ | $12P$ | $6X$ | $12Q$ | $12R$ | $6Y$ | $6Z$ | $6AA$ | $12S$ | $12T$ | $12U$ | $12V$ | $12W$ | $6AB$ | $12X$ |
| $\chi_{201}$ | 2 | 0 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{202}$ | 0 | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 0 | 2 | -2 |
| $\chi_{203}$ | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | 0 | -2 | 2 |
| $\chi_{204}$ | -2 | 0 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{205}$ | 2 | 0 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{206}$ | 0 | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 0 | 2 | -2 |
| $\chi_{207}$ | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | 0 | -2 | 2 |
| $\chi_{208}$ | -2 | 0 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{209}$ | -2 | 0 | 0 | 2 | 2 | -2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{210}$ | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | 2 | 0 | 0 | -2 | 0 | -2 | 2 |
| $\chi_{211}$ | 0 | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | -2 | 0 | 0 | 2 | 0 | 2 | -2 |
| $\chi_{212}$ | 2 | 0 | 0 | -2 | -2 | 2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{220}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{221}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{222}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{223}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{224}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{225}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{226}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{227}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{228}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{229}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{230}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{231}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{232}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{233}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{234}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{235}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{236}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{237}$ | 0 | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | -2 | 0 | -2 | 2 |
| $\chi_{238}$ | 0 | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | -2 | 0 | -2 | 2 |
| $\chi_{239}$ | -2 | 0 | 0 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{240}$ | -2 | 0 | 0 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{241}$ | 2 | 0 | 0 | -2 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{242}$ | 2 | 0 | 0 | -2 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{243}$ | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 2 | 0 | 2 | -2 |
| $\chi_{244}$ | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 2 | 0 | 2 | -2 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | -2 | 2 | 0 | 0 | 0 | -2 | 2 | 0 | -2 | 0 | 0 | 2 | 0 | 2 | -2 |
| $\chi_{250}$ | 2 | 0 | 0 | -2 | -2 | 2 | 0 | 0 | -2 | 0 | 2 | -2 | 0 | 2 | 0 | 0 |
| $\chi_{251}$ | -2 | 0 | 0 | 2 | 2 | -2 | 0 | 0 | 2 | 0 | -2 | 2 | 0 | -2 | 0 | 0 |
| $\chi_{252}$ | 0 | 2 | -2 | 0 | 0 | 0 | 2 | -2 | 0 | 2 | 0 | 0 | -2 | 0 | -2 | 2 |
| $\chi_{253}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | -4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | -4 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $6G$ | | | | $6H$ | | | | | | $8A$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $6AC$ | $12Y$ | $6AD$ | $12Z$ | $6AE$ | $6AF$ | $6AG$ | $6AH$ | $6AI$ | $6AJ$ | $8Y$ | $8Z$ | $8AA$ | $8AB$ |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{220}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{221}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{222}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{223}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{224}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{225}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{226}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{227}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{228}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{229}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{230}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{231}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{232}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{233}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{234}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{235}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{236}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 2 | -2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | -2 | 2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 2 | -2 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | -2 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Table 8.7 : Character table of $2^7 : (2^5 : S_6)$(continued)

| | $8B$ | | | | $10A$ | | | | $12A$ | | | | $12B$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $8AC$ | $8AD$ | $8AE$ | $8AF$ | $10F$ | $20A$ | $10G$ | $20B$ | $12AA$ | $24A$ | $24B$ | $12AB$ | $12AC$ | $24C$ | $24D$ | $12AD$ |
| $\chi_{201}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{202}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{203}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{204}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{205}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{206}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{207}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{208}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{209}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{210}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{211}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{212}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{213}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{214}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{215}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{216}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{217}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{218}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{219}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{220}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{221}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{222}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{223}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{224}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{225}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{226}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{227}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{228}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{229}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{230}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{231}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{232}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{233}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{234}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{235}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{236}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{237}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{238}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{239}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{240}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{241}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{242}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{243}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{244}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{245}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{246}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{247}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{248}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{249}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{250}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{251}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{252}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{253}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{254}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{255}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{256}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{257}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{258}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{259}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{260}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{261}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{262}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{263}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{264}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{265}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{266}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{267}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{268}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{269}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{270}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{271}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{272}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{273}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $\chi_{274}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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## 8.6 The Fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$

We use the results of Section 8.2 and to compute the power maps of the elements of $2^7 : (2^5 : S_6)$ which are listed in Table 8.8 below.

Table 8.8: The power maps of the elements of $2^7 : (2^5 : S_6)$

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | | | | $2A$ | $2H$ | $1A$ | | | |
| | $2A$ | $1A$ | | | | | $4A$ | $2A$ | | | |
| | $2B$ | $1A$ | | | | | $4B$ | $2A$ | | | |
| | $2C$ | $1A$ | | | | | $2I$ | $1A$ | | | |
| | $2D$ | $1A$ | | | | | $4C$ | $2A$ | | | |
| | $2E$ | $1A$ | | | | | $2J$ | $1A$ | | | |
| | $2F$ | $1A$ | | | | | | | | | |
| | $2G$ | $1A$ | | | | | | | | | |
| $2B$ | $2K$ | $1A$ | | | | $2C$ | $2O$ | $1A$ | | | |
| | $2L$ | $1A$ | | | | | $4H$ | $2A$ | | | |
| | $2M$ | $1A$ | | | | | $2P$ | $1A$ | | | |
| | $2N$ | $1A$ | | | | | $4I$ | $2A$ | | | |
| | $4D$ | $2A$ | | | | | $4J$ | $2A$ | | | |
| | $4E$ | $2A$ | | | | | $2Q$ | $1A$ | | | |
| | $4F$ | $2F$ | | | | | $4K$ | $2F$ | | | |
| | $4G$ | $2F$ | | | | | $4L$ | $2F$ | | | |
| $2D$ | $2R$ | $1A$ | | | | $2E$ | $2U$ | $1A$ | | | |
| | $4M$ | $2F$ | | | | | $2V$ | $1A$ | | | |
| | $4N$ | $2F$ | | | | | $4T$ | $2F$ | | | |
| | $2S$ | $1A$ | | | | | $4U$ | $2F$ | | | |
| | $4O$ | $2A$ | | | | | $4V$ | $2F$ | | | |
| | $4P$ | $2F$ | | | | | $4W$ | $2F$ | | | |
| | $4Q$ | $2F$ | | | | | $2W$ | $1A$ | | | |
| | $4R$ | $2A$ | | | | | $4X$ | $2F$ | | | |
| | $4S$ | $2F$ | | | | | $2X$ | $1A$ | | | |
| | $2T$ | $1A$ | | | | | $4Y$ | $2F$ | | | |
| | | | | | | | $2Y$ | $1A$ | | | |
| | | | | | | | $2Z$ | $1A$ | | | |
| $2F$ | $2AA$ | $1A$ | | | | $2G$ | $2AC$ | $1A$ | | | |
| | $4Z$ | $2A$ | | | | | $2AD$ | $1A$ | | | |
| | $2AB$ | $1A$ | | | | | $2AE$ | $1A$ | | | |
| | $4AA$ | $2A$ | | | | | $2AF$ | $1A$ | | | |
| | $4AB$ | $2F$ | | | | | $2AG$ | $1A$ | | | |
| | $4AC$ | $2F$ | | | | | $2AH$ | $1A$ | | | |
| | $4AD$ | $2F$ | | | | | $4AF$ | $2F$ | | | |
| | $4AE$ | $2F$ | | | | | $4AG$ | $2F$ | | | |
| | | | | | | | $4AH$ | $2F$ | | | |
| | | | | | | | $4AI$ | $2F$ | | | |
| $2H$ | $2AI$ | $1A$ | | | | $2I$ | $2AK$ | $1A$ | | | |
| | $4AJ$ | $2A$ | | | | | $4AT$ | $2F$ | | | |
| | $4AK$ | $2F$ | | | | | $4AU$ | $2F$ | | | |
| | $4AL$ | $2F$ | | | | | $4AV$ | $2F$ | | | |
| | $4AM$ | $2F$ | | | | | $4AW$ | $2A$ | | | |
| | $4AN$ | $2F$ | | | | | $2AL$ | $1A$ | | | |
| | $2AJ$ | $1A$ | | | | | $4AX$ | $2F$ | | | |
| | $4AO$ | $2A$ | | | | | $4AY$ | $2A$ | | | |
| | $4AP$ | $2F$ | | | | | $4AZ$ | $2F$ | | | |
| | $4AQ$ | $2F$ | | | | | $4BA$ | $2F$ | | | |
| | $4AR$ | $2F$ | | | | | $4BB$ | $2F$ | | | |
| | $4AS$ | $2F$ | | | | | $4BC$ | $2F$ | | | |

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Table 8.8 : The power maps of the elements of $2^7 : (2^5 : S_6)$ (continued)

| $[g]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|
| $2J$ | $2AM$ | $1A$ | | | |
| | $2AN$ | $1A$ | | | |
| | $4BD$ | $2F$ | | | |
| | $4BE$ | $2F$ | | | |
| | $4BF$ | $2F$ | | | |
| | $4BG$ | $2F$ | | | |
| | $2AO$ | $1A$ | | | |
| | $4BH$ | $2F$ | | | |
| | $2AP$ | $1A$ | | | |
| | $2AQ$ | $1A$ | | | |
| | $4BI$ | $2F$ | | | |
| | $4BJ$ | $2F$ | | | |
| | $4BK$ | $2F$ | | | |
| | $4BL$ | $2F$ | | | |
| $3B$ | $3B$ | | $1A$ | | |
| | $6H$ | $3B$ | $2A$ | | |
| | $6I$ | $3B$ | $2D$ | | |
| | $6J$ | $3B$ | $2C$ | | |
| | $6K$ | $3B$ | $2G$ | | |
| | $6L$ | $3B$ | $2E$ | | |
| $4B$ | $4BQ$ | $2O$ | | | |
| | $4BR$ | $2O$ | | | |
| | $4BS$ | $2O$ | | | |
| | $4BT$ | $2O$ | | | |
| | $8C$ | $4J$ | | | |
| | $8D$ | $4J$ | | | |
| $4D$ | $4CA$ | $2K$ | | | |
| | $4CB$ | $2M$ | | | |
| | $4CC$ | $2K$ | | | |
| | $4CD$ | $2M$ | | | |
| | $4CE$ | $2M$ | | | |
| | $4CF$ | $2M$ | | | |
| $4F$ | $4CO$ | $2AM$ | | | |
| | $8E$ | $4BH$ | | | |
| | $4CP$ | $2AN$ | | | |
| | $8F$ | $4BH$ | | | |
| | $8G$ | $4BH$ | | | |
| | $8H$ | $4BH$ | | | |
| | $4CQ$ | $2AN$ | | | |
| | $4CR$ | $2AM$ | | | |
| $4H$ | $4CW$ | $2AM$ | | | |
| | $8M$ | $4BH$ | | | |
| | $4CX$ | $2AN$ | | | |
| | $8N$ | $4BH$ | | | |
| | $4CY$ | $2AN$ | | | |
| | $4CZ$ | $2AM$ | | | |
| | $8O$ | $4BH$ | | | |
| | $8P$ | $4BH$ | | | |
| $4J$ | $4DG$ | $2AM$ | | | |
| | $4DH$ | $2AM$ | | | |
| | $4DI$ | $2AM$ | | | |
| | $4DJ$ | $2AM$ | | | |
| | $4DK$ | $2AM$ | | | |
| | $8U$ | $4BJ$ | | | |
| | $8V$ | $4BJ$ | | | |
| | $8W$ | $2BJ$ | | | |
| | $4DL$ | $2AM$ | | | |
| | $8X$ | $4BJ$ | | | |

| $[g]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|
| $3A$ | $3A$ | | $1A$ | | |
| | $6A$ | $3A$ | $2A$ | | |
| | $6B$ | $3A$ | $2E$ | | |
| | $6C$ | $3A$ | $2C$ | | |
| | $6D$ | $3A$ | $2D$ | | |
| | $6E$ | $3A$ | $2F$ | | |
| | $6F$ | $3A$ | $2B$ | | |
| | $6G$ | $3A$ | $2G$ | | |
| $4A$ | $4BM$ | $2O$ | | | |
| | $4BN$ | $2O$ | | | |
| | $4BO$ | $2O$ | | | |
| | $4BP$ | $2O$ | | | |
| | $8A$ | $4J$ | | | |
| | $8B$ | $4J$ | | | |
| $4C$ | $4BU$ | $2K$ | | | |
| | $4BV$ | $2M$ | | | |
| | $4BW$ | $2K$ | | | |
| | $4BX$ | $2M$ | | | |
| | $4BY$ | $2M$ | | | |
| | $4BZ$ | $2M$ | | | |
| $4E$ | $4CG$ | $2K$ | | | |
| | $4CH$ | $2M$ | | | |
| | $4CI$ | $2K$ | | | |
| | $4CJ$ | $2M$ | | | |
| | $4CK$ | $2M$ | | | |
| | $4CL$ | $2M$ | | | |
| | $4CM$ | $2M$ | | | |
| | $4CN$ | $2M$ | | | |
| $4G$ | $4CS$ | $2O$ | | | |
| | $8I$ | $4J$ | | | |
| | $8J$ | $4J$ | | | |
| | $4CT$ | $2P$ | | | |
| | $8K$ | $4J$ | | | |
| | $4CU$ | $2O$ | | | |
| | $8L$ | $4J$ | | | |
| | $4CV$ | $2P$ | | | |
| $4I$ | $4DA$ | $2AM$ | | | |
| | $4DB$ | $2AM$ | | | |
| | $4DC$ | $2AM$ | | | |
| | $4DD$ | $2AM$ | | | |
| | $4DE$ | $2AM$ | | | |
| | $8Q$ | $4BH$ | | | |
| | $8R$ | $4BH$ | | | |
| | $4DF$ | $2AM$ | | | |
| | $8S$ | $4BH$ | | | |
| | $8T$ | $4BH$ | | | |
| $5A$ | $5A$ | | | $1A$ | |
| | $10A$ | $5A$ | | $2A$ | |
| | $10B$ | $5A$ | | $2D$ | |
| | $10C$ | $5A$ | | $2C$ | |
| | $10D$ | $5A$ | | $2G$ | |
| | $10E$ | $5A$ | | $2B$ | |

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Table 8.8 : The power maps of the elements of $2^7 : (2^5 : S_6)$ (continued)

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | 2 | 3 | 5 | 7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $6A$ | $6M$ | $3A$ | $2H$ | | | $6B$ | $6P$ | $3A$ | $2K$ | | |
| | $12A$ | $6A$ | $4B$ | | | | $12D$ | $6A$ | $4E$ | | |
| | $6N$ | $3A$ | $2I$ | | | | $6Q$ | $3A$ | $2L$ | | |
| | $12B$ | $6A$ | $4A$ | | | | $12E$ | $6A$ | $4D$ | | |
| | $12C$ | $6A$ | $4C$ | | | | $12F$ | $6E$ | $4F$ | | |
| | $6O$ | $3A$ | $2J$ | | | | $12G$ | $6E$ | $4G$ | | |
| $6C$ | $6R$ | $3A$ | $2O$ | | | $6D$ | $6T$ | $3B$ | $2H$ | | |
| | $12H$ | $6A$ | $4J$ | | | | $12L$ | $6H$ | $4C$ | | |
| | $12I$ | $6A$ | $4H$ | | | | $6U$ | $3B$ | $2J$ | | |
| | $6S$ | $3A$ | $2Q$ | | | | $12M$ | $6H$ | $4B$ | | |
| | $12J$ | $6E$ | $4K$ | | | | | | | | |
| | $12K$ | $6E$ | $4L$ | | | | | | | | |
| $6E$ | $6V$ | $3A$ | $2U$ | | | $6F$ | $6AA$ | $3A$ | $2R$ | | |
| | $12N$ | $6A$ | $4U$ | | | | $12S$ | $3A$ | $4O$ | | |
| | $6W$ | $3A$ | $2V$ | | | | $12T$ | $6G$ | $4P$ | | |
| | $12O$ | $6E$ | $4V$ | | | | $12U$ | $6G$ | $4M$ | | |
| | $12P$ | $6E$ | $4X$ | | | | $12V$ | $6G$ | $4Q$ | | |
| | $6X$ | $3A$ | $2X$ | | | | $12W$ | $6G$ | $4R$ | | |
| | $12Q$ | $6E$ | $4Y$ | | | | $6AB$ | $3A$ | $2T$ | | |
| | $12R$ | $6E$ | $4T$ | | | | $12X$ | $6G$ | $4S$ | | |
| | $6Y$ | $3A$ | $2Z$ | | | | | | | | |
| | $6Z$ | $3A$ | $2Y$ | | | | | | | | |
| $6G$ | $6AC$ | $3B$ | $2AA$ | | | $6H$ | $6AE$ | $3B$ | $2AC$ | | |
| | $12Y$ | $6H$ | $4Z$ | | | | $6AF$ | $3B$ | $2AD$ | | |
| | $6AD$ | $3B$ | $2AB$ | | | | $6AG$ | $3B$ | $2AF$ | | |
| | $12Z$ | $6H$ | $4AA$ | | | | $6AH$ | $3B$ | $2AE$ | | |
| | | | | | | | $6AI$ | $3B$ | $2AG$ | | |
| | | | | | | | $6AJ$ | $3B$ | $2AH$ | | |
| $8A$ | $8Y$ | $4CA$ | | | | $8B$ | $8AC$ | $4BU$ | | | |
| | $8Z$ | $4CB$ | | | | | $8AD$ | $4BV$ | | | |
| | $8AA$ | $4CA$ | | | | | $8AE$ | $4BV$ | | | |
| | $8AB$ | $4CB$ | | | | | $8AF$ | $4BU$ | | | |
| $10A$ | $10F$ | $5A$ | | $2H$ | | $12A$ | $12AA$ | $6R$ | $4BM$ | | |
| | $20A$ | $10A$ | | $4C$ | | | $24A$ | $12H$ | $8A$ | | |
| | $10G$ | $5A$ | | $2J$ | | | $24B$ | $12H$ | $8B$ | | |
| | $20B$ | $10A$ | | $4A$ | | | $12AB$ | $6R$ | $4BN$ | | |
| $12B$ | $12AC$ | $6R$ | $4BQ$ | | | | | | | | |
| | $24C$ | $12H$ | $8C$ | | | | | | | | |
| | $24D$ | $12H$ | $8D$ | | | | | | | | |
| | $12AD$ | $6H$ | $8BR$ | | | | | | | | |

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We are able to obtain the partial fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ by using the information provided by the conjugacy classes of the elements of $2^7 : (2^5 : S_6)$ and $2^7 : Sp_6(2)$, and the fusion map of $2^5 : S_6$ into $Sp_6(2)$. We used the technique of set intersections for characters(discussed in Section 7.1.6) to restrict the irreducible characters $1b$, $63a$ and $63c$ of $2^7 : Sp_6(2)$ to $2^7 : (2^5 : S_6)$ to determine completely the fusion of the classes of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$. Hence based on the partial fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ which has already been determined , we obtain that

$$(1b) \downarrow 2^7 : (2^5 : S_6) = \chi_{112}$$
$$(63a) \downarrow 2^7 : (2^5 : S_6) = \chi_{75} + \chi_{201} + \chi_{264}$$
$$(63c) \downarrow 2^7 : (2^5 : S_6) = \chi_{38} + \chi_{149} + \chi_{253}$$

Using the partial fusion already determined and the values of $1b$, $63a$ and $63c$ on the classes of $2^7 : Sp_6(2)$ and the values of $(1b) \downarrow 2^7 : (2^5 : S_6)$, $(63a) \downarrow 2^7 : (2^5 : S_6)$ and $(63c) \downarrow 2^7 : (2^5 : S_6)$ on the classes of $2^7 : (2^5 : S_6)$, we are able to complete the fusion map of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$ and this is given in Table 8.9.

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Table 8.9: The fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $1A$ | $1A$ | | $1A$ | $2A$ | $2H$ | | $2D$ |
| | $2A$ | | $2C$ | | $4A$ | | $4A$ |
| | $2B$ | | $2A$ | | $4B$ | | $4B$ |
| | $2C$ | | $2A$ | | $2I$ | | $2E$ |
| | $2D$ | | $2B$ | | $4C$ | | $4C$ |
| | $2E$ | | $2B$ | | $2J$ | | $2F$ |
| | $2F$ | | $2C$ | | | | |
| | $2G$ | | $2C$ | | | | |
| $2B$ | $2K$ | | $2G$ | $2C$ | $2O$ | | $2K$ |
| | $2L$ | | $2H$ | | $4H$ | | $4F$ |
| | $2M$ | | $2I$ | | $2P$ | | $2L$ |
| | $2N$ | | $2J$ | | $4I$ | | $4G$ |
| | $4D$ | | $4D$ | | $4J$ | | $4H$ |
| | $4E$ | | $4E$ | | $2Q$ | | $2M$ |
| | $4F$ | | $4E$ | | $4K$ | | $4J$ |
| | $4G$ | | $4D$ | | $4L$ | | $4I$ |
| $2D$ | $2R$ | | $2K$ | $2E$ | $2U$ | | $2D$ |
| | $4M$ | | $4F$ | | $2V$ | | $2E$ |
| | $4N$ | | $4G$ | | $4T$ | | $4A$ |
| | $2S$ | | $2L$ | | $4U$ | | $4A$ |
| | $4O$ | | $4I$ | | $4V$ | | $4B$ |
| | $4P$ | | $4J$ | | $4W$ | | $4B$ |
| | $4Q$ | | $4H$ | | $2W$ | | $2E$ |
| | $4R$ | | $4I$ | | $4X$ | | $4C$ |
| | $4S$ | | $4J$ | | $2X$ | | $2F$ |
| | $2T$ | | $2M$ | | $4Y$ | | $4C$ |
| | | | | | $2Y$ | | $2F$ |
| | | | | | $2Z$ | | $2E$ |
| $2F$ | $2AA$ | | $2N$ | $2G$ | $2AC$ | | $2G$ |
| | $4Z$ | | $4K$ | | $2AD$ | | $2I$ |
| | $2AB$ | | $2O$ | | $2AE$ | | $2H$ |
| | $4AA$ | | $4L$ | | $2AF$ | | $2J$ |
| | $4AB$ | | $4M$ | | $2AG$ | | $2I$ |
| | $4AC$ | | $4N$ | | $2AH$ | | $2J$ |
| | $4AD$ | | $4P$ | | $4AF$ | | $4E$ |
| | $4AE$ | | $40$ | | $4AG$ | | $4D$ |
| | | | | | $4AH$ | | $4D$ |
| | | | | | $4AI$ | | $4E$ |
| $2H$ | $2AI$ | | $2N$ | $2I$ | $2AK$ | | $2N$ |
| | $4AJ$ | | $4K$ | | $4AT$ | | $4K$ |
| | $4AK$ | | $4O$ | | $4AU$ | | $4O$ |
| | $4AL$ | | $4L$ | | $4AV$ | | $4L$ |
| | $4AM$ | | $4M$ | | $4AW$ | | $4M$ |
| | $4AN$ | | $4P$ | | $2AL$ | | $2O$ |
| | $2AJ$ | | $2O$ | | $4AX$ | | $4P$ |
| | $4AO$ | | $4N$ | | $4AY$ | | $4N$ |
| | $4AP$ | | $4O$ | | $2AZ$ | | $4P$ |
| | $4AQ$ | | $4N$ | | $4BA$ | | $4M$ |
| | $4AR$ | | $4M$ | | $4BB$ | | $4N$ |
| | $4AS$ | | $4P$ | | $4BC$ | | $4O$ |
| $2J$ | $2AM$ | | $2K$ | $3A$ | $3A$ | | $3A$ |
| | $2AN$ | | $2L$ | | $6A$ | | $6C$ |
| | $4BD$ | | $4F$ | | $6B$ | | $6A$ |
| | $4BE$ | | $4G$ | | $6C$ | | $6B$ |
| | $4BF$ | | $4H$ | | $6D$ | | $6A$ |
| | $4BG$ | | $4G$ | | $6E$ | | $6C$ |
| | $2AO$ | | $2M$ | | $6F$ | | $6B$ |
| | $4BH$ | | $4H$ | | $6G$ | | $6C$ |
| | $2AP$ | | $2L$ | | | | |
| | $2AQ$ | | $2M$ | | | | |
| | $4BI$ | | $4I$ | | | | |
| | $4BJ$ | | $4J$ | | | | |
| | $4BK$ | | $4I$ | | | | |
| | $4BL$ | | $4J$ | | | | |

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Table 8.9 :The fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$(continued)

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $3B$ | $3B$ | | $3C$ | $4A$ | $4BM$ | | $4U$ |
| | $6H$ | | $6F$ | | $4BN$ | | $4V$ |
| | $6I$ | | $6G$ | | $4BO$ | | $4W$ |
| | $6J$ | | $6E$ | | $4BP$ | | $4X$ |
| | $6K$ | | $6F$ | | $8A$ | | $8A$ |
| | $6L$ | | $6G$ | | $8B$ | | $8B$ |
| $4B$ | $4BQ$ | | $4Y$ | $4C$ | $4BU$ | | $4AC$ |
| | $4BR$ | | $4Z$ | | $4BV$ | | $4AD$ |
| | $4BS$ | | $4AA$ | | $4BW$ | | $4AE$ |
| | $4BT$ | | $4AB$ | | $4BX$ | | $4AF$ |
| | $8C$ | | $8C$ | | $4BY$ | | $4AG$ |
| | $8D$ | | $8D$ | | $4BZ$ | | $4AH$ |
| $4D$ | $4CA$ | | $4Q$ | $4E$ | $4CG$ | | $4AC$ |
| | $4CB$ | | $4S$ | | $4CH$ | | $4AD$ |
| | $4CC$ | | $4R$ | | $4CI$ | | $4AE$ |
| | $4CD$ | | $4T$ | | $4CJ$ | | $4AF$ |
| | $4CE$ | | $4S$ | | $4CK$ | | $4AH$ |
| | $4CF$ | | $4T$ | | $4CL$ | | $4AG$ |
| | | | | | $4CM$ | | $4AG$ |
| | | | | | $4CN$ | | $4AH$ |
| $4F$ | $4CO$ | | $4AI$ | $4G$ | $4CS$ | | $4AI$ |
| | $8E$ | | $8F$ | | $8I$ | | $8E$ |
| | $4CP$ | | $4AK$ | | $8J$ | | $8H$ |
| | $8F$ | | $8G$ | | $4CT$ | | $4AK$ |
| | $8G$ | | $8H$ | | $8K$ | | $8G$ |
| | $8H$ | | $8E$ | | $4CU$ | | $4AL$ |
| | $4CQ$ | | $4AJ$ | | $8L$ | | $8F$ |
| | $4CR$ | | $4AL$ | | $4CV$ | | $4AJ$ |
| $4H$ | $4CW$ | | $4AI$ | $4I$ | $4DA$ | | $4U$ |
| | $8M$ | | $8H$ | | $4DB$ | | $4V$ |
| | $4CX$ | | $4AJ$ | | $4DC$ | | $4X$ |
| | $8N$ | | $8G$ | | $4DD$ | | $4W$ |
| | $4CY$ | | $4AK$ | | $4DE$ | | $4X$ |
| | $4CZ$ | | $4AL$ | | $8Q$ | | $8B$ |
| | $8O$ | | $8E$ | | $8R$ | | $8A$ |
| | $8P$ | | $8F$ | | $4DF$ | | $4W$ |
| | | | | | $8S$ | | $8A$ |
| | | | | | $8T$ | | $8B$ |
| $4J$ | $4DG$ | | $4Y$ | $5A$ | $5A$ | | $5A$ |
| | $4DH$ | | $4Z$ | | $10A$ | | $10B$ |
| | $4DI$ | | $4AB$ | | $10B$ | | $10A$ |
| | $4DJ$ | | $4AA$ | | $10C$ | | $10C$ |
| | $4DK$ | | $4AB$ | | $10D$ | | $10B$ |
| | $8U$ | | $8D$ | | $10E$ | | $10C$ |
| | $8V$ | | $8C$ | | | | |
| | $8W$ | | $8C$ | | | | |
| | $4DL$ | | $4AA$ | | | | |
| | $8X$ | | $8D$ | | | | |
| $6A$ | $6M$ | | $6H$ | $6B$ | $6P$ | | $6K$ |
| | $12A$ | | $12A$ | | $12D$ | | $12E$ |
| | $6N$ | | $6I$ | | $6Q$ | | $6L$ |
| | $12B$ | | $12B$ | | $12E$ | | $12D$ |
| | $12C$ | | $12C$ | | $12F$ | | $12E$ |
| | $6O$ | | $6J$ | | $12G$ | | $12D$ |
| $6C$ | $6R$ | | $6O$ | $6D$ | $6T$ | | $6U$ |
| | $12H$ | | $12F$ | | $12L$ | | $12J$ |
| | $12I$ | | $12G$ | | $6U$ | | $6U$ |
| | $6S$ | | $6P$ | | $12M$ | | $12K$ |
| | $12J$ | | $12I$ | | | | |
| | $12K$ | | $12H$ | | | | |

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Table 8.9 :The fusion of $2^7 : (2^5 : S_6)$ into $2^7 : Sp_6(2)$(continued)

| $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ | $[q]_{2^5:S_6}$ | $[g]_{2^7:(2^5:S_6)}$ | $\longrightarrow$ | $[x]_{2^7:Sp_6(2)}$ |
|---|---|---|---|---|---|---|---|
| $6E$ | $6V$ | | $6H$ | $6F$ | $6AA$ | | $6O$ |
| | $12N$ | | $12B$ | | $12S$ | | $12H$ |
| | $6W$ | | $6I$ | | $12T$ | | $12I$ |
| | $12O$ | | $12A$ | | $12U$ | | $12G$ |
| | $12P$ | | $12C$ | | $12V$ | | $12F$ |
| | $6X$ | | $6J$ | | $12W$ | | $12H$ |
| | $12Q$ | | $12C$ | | $6AB$ | | $6P$ |
| | $12R$ | | $12B$ | | $12X$ | | $12I$ |
| | $6Y$ | | $6I$ | | | | |
| | $6Z$ | | $6J$ | | | | |
| $6G$ | $6AC$ | | $6W$ | $6H$ | $6AE$ | | $6Q$ |
| | $12Y$ | | $12L$ | | $6AF$ | | $6S$ |
| | $6AD$ | | $6X$ | | $6AG$ | | $6T$ |
| | $12Z$ | | $12M$ | | $6AH$ | | $6R$ |
| | | | | | $6AI$ | | $6S$ |
| | | | | | $6AJ$ | | $6T$ |
| $8A$ | $8Y$ | | $8M$ | $8B$ | $8AC$ | | $8I$ |
| | $8Z$ | | $8O$ | | $8AD$ | | $8J$ |
| | $8AA$ | | $8P$ | | $8AE$ | | $8K$ |
| | $8AB$ | | $8N$ | | $8AF$ | | $8L$ |
| $10A$ | $10F$ | | $10D$ | $12A$ | $12AA$ | | $12N$ |
| | $20A$ | | $20A$ | | $24A$ | | $24A$ |
| | $10G$ | | $10E$ | | $24B$ | | $24B$ |
| | $20B$ | | $20B$ | | $12AB$ | | $12O$ |
| $12B$ | $12AC$ | | $12P$ | | | | |
| | $24C$ | | $24C$ | | | | |
| | $24D$ | | $24D$ | | | | |
| | $12AD$ | | $12Q$ | | | | |

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# Appendices

## Appendix A

## Progamme A $V := VectorSpace(FiniteField(q), n);$

$S < g1, g2 >:= MatrixGroup < n, Finite\ Field(GF(2))|generators >;$

$c := classes(S);$

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$O_o := Orbit(S, elt < V|\alpha_1, ..., \alpha_n >);$

$O_1 := Orbit(S, elt < V|\beta_1, ..., \beta_n >);$

$\vdots$

$O_{k'} := Orbit(S, elt < V|\delta_1, ..., \delta_n >);$

$O := O_o\ join\ O_1\ join\ O_2\ join ... join\ O_{k'};$

$for\ i\ to\ n(c)\ do;$

$print\ c[i, 1];$

$w := elt < V|0_1, 0_2, ..., 0_n >;$

$e := \{\}$

$while(O \text{ diff } e)\ ne\ \{\}\ do$

$d := \{\}$ ;

$for\ x\ in\ O\ do$;

$y := \{x + w + (x * c[i, 3])\}$ ;

$d :=\ d\ join\ y$;

$end\ for$;

$print\ d$;

$e := d\ join\ e$;

$if(O$ diff $e)\ ne\ \{\}\ then$

$w\ =\ Representative(O$ diff $e)$;

$end\ if$;

$end\ while$;

$r :=\ \{\}$

; $u :=\ elt < V|0, 0, ..., 0 >$;

$while(O$ diff $r)\ ne\ \{\}\ do$;

$m := \{\}$;

$for\ g\ in\ Centralizer(S, c[i, 3])\ do$

$l :=\ u * g$;

$m\ =\ m\ join\ l$;

$end\ for$;

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$print$"$A\ block\ for\ the\ vectors\ under\ the\ action\ of\ centralizer:$";

$print\ m$;

$r :=\ m\ join\ r$;

$if\ (O$ diff $r)\ ne\ \{\}\ then$

$u :=\ Representative(O$ diff $r)$;

$end\ if$;

$end\ while$;

$print$" $*\ *\ *\ *

# Appendix B

# Progamme C

gap>ct:=fuction()local ct;ct:=rec();

>ct.SizesCentralizers:=[m Centralizer Orders];

>ct.OrdersClassRepresentatives:=[m Class Representatives Orders];

>ct.Irr:=[[$m \times m$ irreducibles]]; >ct.UnderlyingCharacteristic:=0;ct.Id:=$\overline{G}$;

>ConvertToLibraryCharacterTable NC(ct);return ct;end;ct:=ct();

gap>SetInfoLevel(InfoCharacterTable,2);

gap>IsInternallyConsistent(ct);

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gap>PossiblePowerMaps(ct,$p$); ($p$-prime divisor of $|G|$).