

# $S_7 \pmod{3}$

	blocks	defect	matrix
$3.G :$	1 2	3 2	$13 \times 5$ $9 \times 4$
$6.G :$	3 4	3 1	$10 \times 2$ $3 \times 2$

<b>Block 1:</b>	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{3+}$	$\varphi_{5,0}$	$\varphi_{5,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.
$1_2 = \chi_{1,1}$	.	1	.	.	.
$20_1 = \chi_{3+}$	.	.	1	.	.
$14_1 = \chi_{5,0}$	1	.	.	1	.
$14_2 = \chi_{5,1}$	.	1	.	.	1
$14_3 = \chi_{6,0}$	.	1	.	1	.
$14_4 = \chi_{6,1}$	1	.	.	.	1
$35_1 = \chi_{9,0}$	1	1	1	1	.
$35_2 = \chi_{9,1}$	1	1	1	.	1
$30_2 = \chi_{19+}$	2	2	.	1	1
$42_2 = \chi_{21+}$	1	1	2	.	.
$48_1 = \chi_{22+}$	1	1	1	1	1
$48_2 = \chi_{23+}$	1	1	1	1	1

$$\begin{aligned} \varphi_{1,0} &= 1_1 \\ \varphi_{1,1} &= 1_2 \\ \varphi_{3+} &= 20_1 \\ \varphi_{5,0} &= 13_1 \\ \varphi_{5,1} &= 13_2 \end{aligned}$$

<b>Block 2<sub>1</sub>, 2<sub>2</sub>:</b>	$\varphi_{2,0}$	$\varphi_{6,1}$	$\varphi_{2,1}$	$\varphi_{6,0}$
$6_1 = \chi_{2,0}$	1	.	.	.
$15_2 = \chi_{7,1}$	.	1	.	.
$21_2 = \chi_{8,1}$	1	1	.	.
$6_2 = \chi_{2,1}$	.	.	1	.
$15_1 = \chi_{7,0}$	.	.	.	1
$21_1 = \chi_{8,0}$	.	.	1	1
$12_1 = \chi_{17+}$	1	.	1	.
$30_1 = \chi_{18+}$	.	1	.	1
$42_1 = \chi_{20+}$	1	1	1	1

$$\begin{aligned} \varphi_{2,0} &= 6_1 \\ \varphi_{2,1} &= 6_2 \\ \varphi_{6,0} &= 15_1 \\ \varphi_{6,1} &= 15_2 \end{aligned}$$

<b>Block 3:</b>	$\varphi_{7+}$	$\varphi_{9+}$
$8_1 = \chi_{10+}$	1	.
$28_1 = \chi_{12+}$	2	1
$20_2 = \chi_{14,0}$	1	1
$20_3 = \chi_{14,1}$	1	1
$20_4 = \chi_{15,0}$	1	1
$20_5 = \chi_{15,1}$	1	1
$12_2 = \chi_{24+}$	.	1
$12_3 = \chi_{25+}$	.	1
$48_3 = \chi_{26+}$	3	2
$48_4 = \chi_{27+}$	3	2

$$\begin{aligned}\varphi_{7+} &= 8_1 \\ \varphi_{9+} &= 12_1\end{aligned}$$

<b>Block 4<sub>1</sub>, 4<sub>2</sub>:</b>	$\varphi_{11,0}$	$\varphi_{11,1}$
$36_1 = \chi_{16,0}$	1	.
$36_2 = \chi_{16,1}$	.	1
$72_1 = \chi_{28+}$	1	1

$$\begin{aligned}\varphi_{11,0} &= 36_1 \\ \varphi_{11,1} &= 36_2\end{aligned}$$