

## $M_{22.2} \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	$5 \times 3$
	2	1	$5 \times 3$
	3	0	$21_1 = \chi_{2,0}, \varphi_{2,0}$
	4	0	$21_2 = \chi_{2,1}, \varphi_{2,1}$
	5	0	$154_1 = \chi_{7,0}, \varphi_{5,0}$
	6	0	$154_2 = \chi_{7,1}, \varphi_{5,1}$
	7	0	$210_1 = \chi_{8,0}, \varphi_{6,0}$
	8	0	$210_2 = \chi_{8,1}, \varphi_{6,1}$
	9	0	$231_1 = \chi_{9,0}, \varphi_{7,0}$
	10	0	$231_2 = \chi_{9,1}, \varphi_{7,1}$
	11	0	$560_1 = \chi_{10+}, \varphi_{8+}$
	12	0	$385_1 = \chi_{12,0}, \varphi_{10,0}$
	13	0	$385_2 = \chi_{12,1}, \varphi_{10,1}$
$2.G :$	14	1	$5 \times 3$
	15	1	$5 \times 3$
	16	0	$56_1 = \chi_{15,0}, \varphi_{12,0}$
	17	0	$56_2 = \chi_{15,1}, \varphi_{12,1}$
	18	0	$252_1 = \chi_{17+}, \varphi_{14+}$
	19	0	$308_1 = \chi_{19+}, \varphi_{16+}$
	20	0	$210_3 = \chi_{21,0}, \varphi_{18,0}$
	21	0	$210_4 = \chi_{21,1}, \varphi_{18,1}$
$4.G :$	22	0	$112_1 = \chi_{24+}, \varphi_{21+}$

	blocks	defect	matrix
	$23 = 22$	0	$112_2 = \chi_{25+}, \varphi_{22+}$
	24	1	$5 \times 3$
	25	0	$1120_1 = \chi_{31+}, \varphi_{25+}$
$3.G :$	26	0	$42_1 = \chi_{32+}, \varphi_{26+}$
	27	1	$5 \times 3$
	28	0	$210_5 = \chi_{36+}, \varphi_{29+}$
	29	0	$210_6 = \chi_{37+}, \varphi_{30+}$
	30	0	$420_1 = \chi_{38+}, \varphi_{31+}$
	31	0	$462_1 = \chi_{39+}, \varphi_{32+}$
	32	0	$462_2 = \chi_{40+}, \varphi_{33+}$
	$6.G :$	33	1
34		0	$252_2 = \chi_{46+}, \varphi_{37+}$
35		0	$252_3 = \chi_{47+}, \varphi_{38+}$
36		0	$420_2 = \chi_{48+}, \varphi_{39+}$
37		0	$420_3 = \chi_{49+}, \varphi_{40+}$
38		0	$420_4 = \chi_{50+}, \varphi_{41+}$
$12.G :$		39	1
	40	1	$5 \times 3$
	41	0	$672_1 = \chi_{57+}, \varphi_{46+}$
	42	0	$672_2 = \chi_{57*89+}, \varphi_{46*89+}$
	43	0	$672_3 = \chi_{57*67+}, \varphi_{46*67+}$
	44	0	$672_4 = \chi_{58+}, \varphi_{47+}$

<b>Block 1:</b>	$\varphi_{1,0}$	$\varphi_{3,0}$	$\varphi_{4,0}$
$1_1 = \chi_{1,0}$	1	.	.
$45_1 = \chi_{3,0}$	.	1	.
$45_3 = \chi_{4,0}$	.	1	.
$55_1 = \chi_{5,0}$	1	.	1
$99_1 = \chi_{6,0}$	.	1	1

$$\begin{aligned} \varphi_{1,0} &= 1_1 \\ \varphi_{3,0} &= 45_1 \\ \varphi_{4,0} &= 54_1 \end{aligned}$$

<b>Block 2:</b>	$\varphi_{1,1}$	$\varphi_{3,1}$	$\varphi_{4,1}$
$1_2 = \chi_{1,1}$	1	.	.
$45_2 = \chi_{3,1}$	.	1	.
$45_4 = \chi_{4,1}$	.	1	.
$55_2 = \chi_{5,1}$	1	.	1
$99_2 = \chi_{6,1}$	.	1	1

$$\begin{aligned}\varphi_{1,1} &= 1_2 \\ \varphi_{3,1} &= 45_2 \\ \varphi_{4,1} &= 54_2\end{aligned}$$

<b>Block 14:</b>	$\varphi_{11,0}$	$\varphi_{13,1}$	$\varphi_{19,0}$
$10_1 = \chi_{13,0}$	1	.	.
$10_3 = \chi_{14,0}$	1	.	.
$120_2 = \chi_{16,1}$	.	1	.
$330_1 = \chi_{22,0}$	1	.	1
$440_1 = \chi_{23,0}$	.	1	1

$$\begin{aligned}\varphi_{11,0} &= 10_1 \\ \varphi_{13,1} &= 120_2 \\ \varphi_{19,0} &= 320_1\end{aligned}$$

<b>Block 15:</b>	$\varphi_{11,1}$	$\varphi_{13,0}$	$\varphi_{19,1}$
$10_2 = \chi_{13,1}$	1	.	.
$10_4 = \chi_{14,1}$	1	.	.
$120_1 = \chi_{16,0}$	.	1	.
$330_2 = \chi_{22,1}$	1	.	1
$440_2 = \chi_{23,1}$	.	1	1

$$\begin{aligned}\varphi_{11,1} &= 10_2 \\ \varphi_{13,0} &= 120_1 \\ \varphi_{19,1} &= 320_2\end{aligned}$$

<b>Block 24:</b>	$\varphi_{20+}$	$\varphi_{23+}$	$\varphi_{24+}$
$288_1 = \chi_{26+}$	.	1	.
$288_2 = \chi_{27+}$	.	1	.
$320_1 = \chi_{28+}$	.	.	1
$320_2 = \chi_{29+}$	1	1	.
$352_1 = \chi_{30+}$	1	.	1

$$\begin{aligned}\varphi_{20+} &= 32_1 \\ \varphi_{23+} &= 288_1 \\ \varphi_{24+} &= 320_3\end{aligned}$$

<b>Block 27:</b>	$\varphi_{27+}$	$\varphi_{28+}$	$\varphi_{34+}$
$90_1 = \chi_{33+}$	1	.	.
$90_2 = \chi_{34+}$	1	.	.
$198_1 = \chi_{35+}$	.	1	.
$660_1 = \chi_{41+}$	1	.	1
$768_1 = \chi_{42+}$	.	1	1

$$\begin{aligned}\varphi_{27+} &= 90_1 \\ \varphi_{28+} &= 198_1 \\ \varphi_{34+} &= 570_1\end{aligned}$$

<b>Block 33:</b>	$\varphi_{35+}$	$\varphi_{36+}$	$\varphi_{42+}$
$132_1 = \chi_{43+}$	.	1	.
$132_2 = \chi_{44+}$	.	1	.
$240_1 = \chi_{45+}$	1	1	.
$660_2 = \chi_{51+}$	.	.	1
$768_2 = \chi_{52+}$	1	.	1

$$\begin{aligned} \varphi_{35+} &= 108_1 \\ \varphi_{36+} &= 132_1 \\ \varphi_{42+} &= 660_1 \end{aligned}$$

<b>Block 39:</b>	$\varphi_{43+}$	$\varphi_{44+}$	$\varphi_{45+}$
$240_2 = \chi_{53+}$	1	.	.
$240_5 = \chi_{54+}$	.	1	.
$288_3 = \chi_{55+}$	.	.	1
$288_5 = \chi_{56+}$	.	.	1
$768_3 = \chi_{59+}$	1	1	1

$$\begin{aligned} \varphi_{43+} &= 240_1 \\ \varphi_{44+} &= 240_4 \\ \varphi_{45+} &= 288_2 \end{aligned}$$

<b>Block 40:</b>	$\varphi_{43*17+}$	$\varphi_{43*7+}$	$\varphi_{45*5+}$
$240_3 = \chi_{53*17+}$	1	.	.
$240_4 = \chi_{53*7+}$	.	1	.
$288_4 = \chi_{55*29+}$	.	.	1
$288_6 = \chi_{56*29+}$	.	.	1
$768_4 = \chi_{59*5+}$	1	1	1

$$\begin{aligned} \varphi_{43*17+} &= 240_2 \\ \varphi_{43*7+} &= 240_3 \\ \varphi_{45*5+} &= 288_3 \end{aligned}$$