

# $S_{11} \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	$7 \times 6$
	2	1	$7 \times 6$
	3	1	$7 \times 6$
	4	1	$7 \times 6$
	5	1	$7 \times 6$
	6	0	$252_1 = \chi_{7+}, \varphi_{7+}$
	7	0	$210_1 = \chi_{11,0}, \varphi_{12,0}$
	8	0	$210_2 = \chi_{11,1}, \varphi_{12,1}$
	9	0	$231_1 = \chi_{12,0}, \varphi_{13,0}$
	10	0	$231_2 = \chi_{12,1}, \varphi_{13,1}$
	11	0	$385_1 = \chi_{14,0}, \varphi_{14,0}$
	12	0	$385_2 = \chi_{14,1}, \varphi_{14,1}$
	13	0	$462_1 = \chi_{15,0}, \varphi_{15,0}$
	14	0	$462_2 = \chi_{15,1}, \varphi_{15,1}$
	15	0	$693_1 = \chi_{21,0}, \varphi_{21,0}$
	16	0	$693_2 = \chi_{21,1}, \varphi_{21,1}$
	17	0	$924_1 = \chi_{23,0}, \varphi_{23,0}$

	blocks	defect	matrix
$2.G :$	18	0	$924_2 = \chi_{23,1}, \varphi_{23,1}$
	19	0	$1155_1 = \chi_{27,0}, \varphi_{24,0}$
	20	0	$1155_2 = \chi_{27,1}, \varphi_{24,1}$
	21	0	$1232_1 = \chi_{28,0}, \varphi_{25,0}$
	22	0	$1232_2 = \chi_{28,1}, \varphi_{25,1}$
	23	0	$1540_1 = \chi_{30,0}, \varphi_{26,0}$
	24	0	$1540_2 = \chi_{30,1}, \varphi_{26,1}$
	25	0	$2310_1 = \chi_{31,0}, \varphi_{27,0}$
	26	0	$2310_2 = \chi_{31,1}, \varphi_{27,1}$
	27	1	$5 \times 3$
	28	1	$7 \times 6$
	29	0	$560_1 = \chi_{36,0}, \varphi_{32,0}$
	30	0	$560_2 = \chi_{36,1}, \varphi_{32,1}$
	31	0	$1232_3 = \chi_{37+}, \varphi_{33+}$
	32	0	$672_1 = \chi_{39,0}, \varphi_{35,0}$
	33	0	$672_2 = \chi_{39,1}, \varphi_{35,1}$
	34	0	$2464_1 = \chi_{43+}, \varphi_{41+}$

Block 1:	$\varphi_{1,0}$	$\varphi_{6,1}$	$\varphi_{9,0}$	$\varphi_{11,0}$	$\varphi_{16,1}$	$\varphi_{20,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.
$120_2 = \chi_{6,1}$	.	1	.	.	.	.
$132_1 = \chi_{9,0}$	1	.	1	.	.	.
$330_1 = \chi_{13,0}$	.	.	1	1	.	.
$594_2 = \chi_{17,1}$	.	1	.	.	1	.
$825_2 = \chi_{22,1}$	.	.	.	1	.	1
$1100_2 = \chi_{26,1}$	.	.	.	.	1	1

$$\begin{aligned}
\varphi_{1,0} &= 1_1 \\
\varphi_{6,1} &= 120_2 \\
\varphi_{9,0} &= 131_1 \\
\varphi_{11,0} &= 199_1 \\
\varphi_{16,1} &= 474_2 \\
\varphi_{20,1} &= 626_2
\end{aligned}$$

Block 2:	$\varphi_{1,1}$	$\varphi_{6,0}$	$\varphi_{9,1}$	$\varphi_{11,1}$	$\varphi_{16,0}$	$\varphi_{20,0}$
$1_2 = \chi_{1,1}$	1	.	.	.	.	.
$120_1 = \chi_{6,0}$	.	1	.	.	.	.
$132_2 = \chi_{9,1}$	1	.	1	.	.	.
$330_2 = \chi_{13,1}$	.	.	1	1	.	.
$594_1 = \chi_{17,0}$	.	1	.	.	1	.
$825_1 = \chi_{22,0}$	.	.	.	1	.	1
$1100_1 = \chi_{26,0}$	.	.	.	.	1	1

$$\begin{aligned}
\varphi_{1,1} &= 1_2 \\
\varphi_{6,0} &= 120_1 \\
\varphi_{9,1} &= 131_2 \\
\varphi_{11,1} &= 199_2 \\
\varphi_{16,0} &= 474_1 \\
\varphi_{20,0} &= 626_1
\end{aligned}$$

<b>Block 3:</b>	$\varphi_{2,0}$	$\varphi_{4,1}$	$\varphi_{10,0}$	$\varphi_{17,0}$	$\varphi_{18,1}$	$\varphi_{22,0}$	
$10_1 = \chi_{2,0}$	1	.	.	.	.	.	$\varphi_{2,0} = 10_1$
$45_2 = \chi_{4,1}$	.	1	.	.	.	.	$\varphi_{4,1} = 45_2$
$165_1 = \chi_{10,0}$	1	.	1	.	.	.	$\varphi_{10,0} = 155_1$
$550_2 = \chi_{16,1}$	.	1	.	.	1	.	$\varphi_{17,0} = 485_1$
$990_2 = \chi_{24,1}$	.	.	.	1	1	.	$\varphi_{18,1} = 505_2$
$990_3 = \chi_{25,0}$	.	.	1	.	.	1	$\varphi_{22,0} = 835_1$
$1320_1 = \chi_{29,0}$	.	.	.	1	.	1	

<b>Block 4:</b>	$\varphi_{2,1}$	$\varphi_{4,0}$	$\varphi_{10,1}$	$\varphi_{17,1}$	$\varphi_{18,0}$	$\varphi_{22,1}$	
$10_2 = \chi_{2,1}$	1	.	.	.	.	.	$\varphi_{2,1} = 10_2$
$45_1 = \chi_{4,0}$	.	1	.	.	.	.	$\varphi_{4,0} = 45_1$
$165_2 = \chi_{10,1}$	1	.	1	.	.	.	$\varphi_{10,1} = 155_2$
$550_1 = \chi_{16,0}$	.	1	.	.	1	.	$\varphi_{17,1} = 485_2$
$990_1 = \chi_{24,0}$	.	.	.	1	1	.	$\varphi_{18,0} = 505_1$
$990_4 = \chi_{25,1}$	.	.	1	.	.	1	$\varphi_{22,1} = 835_2$
$1320_2 = \chi_{29,1}$	.	.	.	1	.	1	

<b>Block 5:</b>	$\varphi_{3,0}$	$\varphi_{3,1}$	$\varphi_{5,0}$	$\varphi_{5,1}$	$\varphi_{19,0}$	$\varphi_{19,1}$	
$44_1 = \chi_{3,0}$	1	.	.	.	.	.	$\varphi_{3,0} = 44_1$
$44_2 = \chi_{3,1}$	.	1	.	.	.	.	$\varphi_{3,1} = 44_2$
$110_1 = \chi_{5,0}$	1	.	1	.	.	.	$\varphi_{5,0} = 66_1$
$110_2 = \chi_{5,1}$	.	1	.	1	.	.	$\varphi_{5,1} = 66_2$
$1188_1 = \chi_{18+}$	.	.	.	.	1	1	$\varphi_{19,0} = 594_1$
$660_1 = \chi_{20,0}$	.	.	1	.	1	.	$\varphi_{19,1} = 594_2$
$660_2 = \chi_{20,1}$	.	.	.	1	.	1	

<b>Block 27:</b>	$\varphi_{28+}$	$\varphi_{36+}$	$\varphi_{38+}$	
$32_1 = \chi_{32+}$	1	.	.	$\varphi_{28+} = 32_1$
$1760_1 = \chi_{40+}$	.	.	1	$\varphi_{36+} = 1408_1$
$1440_1 = \chi_{45,0}$	1	1	.	$\varphi_{38+} = 1760_1$
$1440_2 = \chi_{45,1}$	1	1	.	
$3168_2 = \chi_{48+}$	.	1	1	

<b>Block 28:</b>	$\varphi_{30,0}$	$\varphi_{30,1}$	$\varphi_{31,0}$	$\varphi_{31,1}$	$\varphi_{40,0}$	$\varphi_{40,1}$	
$144_1 = \chi_{34,0}$	1	.	.	.	.	.	$\varphi_{30,0} = 144_1$
$144_2 = \chi_{34,1}$	.	1	.	.	.	.	$\varphi_{30,1} = 144_2$
$528_1 = \chi_{35,0}$	.	.	1	.	.	.	$\varphi_{31,0} = 528_1$
$528_2 = \chi_{35,1}$	.	.	.	1	.	.	$\varphi_{31,1} = 528_2$
$1200_1 = \chi_{42,0}$	.	1	.	.	1	.	$\varphi_{40,0} = 1056_1$
$1200_2 = \chi_{42,1}$	1	.	.	.	.	1	$\varphi_{40,1} = 1056_2$
$3168_1 = \chi_{46+}$	.	.	1	1	1	1	