

$G_2(4).2 \pmod{13}$

	blocks	defect	matrix
$G :$	1	1	13×12
	2	0	$65_1 = \chi_{2,0}, \varphi_{2,0}$
	3	0	$65_2 = \chi_{2,1}, \varphi_{2,1}$
	4	0	$78_1 = \chi_{3,0}, \varphi_{3,0}$
	5	0	$78_2 = \chi_{3,1}, \varphi_{3,1}$
	6	0	$364_1 = \chi_{7,0}, \varphi_{7,0}$
	7	0	$364_2 = \chi_{7,1}, \varphi_{7,1}$
	8	0	$364_3 = \chi_{8,0}, \varphi_{8,0}$
	9	0	$364_4 = \chi_{8,1}, \varphi_{8,1}$
	10	0	$650_1 = \chi_{10,0}, \varphi_{10,0}$
	11	0	$650_2 = \chi_{10,1}, \varphi_{10,1}$
	12	0	$1638_1 = \chi_{11+}, \varphi_{11+}$
	13	0	$1638_2 = \chi_{13+}, \varphi_{13+}$
	14	0	$1300_1 = \chi_{15,0}, \varphi_{15,0}$
	15	0	$1300_2 = \chi_{15,1}, \varphi_{15,1}$
	16	0	$1365_1 = \chi_{16,0}, \varphi_{16,0}$
	17	0	$1365_2 = \chi_{16,1}, \varphi_{16,1}$
	18	0	$5850_1 = \chi_{17+}, \varphi_{17+}$
	19	0	$2925_1 = \chi_{19,0}, \varphi_{19,0}$
	20	0	$2925_2 = \chi_{19,1}, \varphi_{19,1}$
	21	0	$6552_1 = \chi_{20+}, \varphi_{20+}$

	blocks	defect	matrix
	22	0	$6552_2 = \chi_{22+}, \varphi_{22+}$
	23	0	$8190_1 = \chi_{24+}, \varphi_{25+}$
	24	0	$8190_2 = \chi_{26+}, \varphi_{27+}$
	25	0	$4160_1 = \chi_{29,0}, \varphi_{29,0}$
	26	0	$4160_2 = \chi_{29,1}, \varphi_{29,1}$
	27	0	$5460_1 = \chi_{32,0}, \varphi_{30,0}$
	28	0	$5460_2 = \chi_{32,1}, \varphi_{30,1}$
	$2.G :$	29	1	$13 \times 12$
30		0	$208_1 = \chi_{34+}, \varphi_{32+}$
31		0	$364_5 = \chi_{36,0}, \varphi_{34,0}$
32		0	$364_6 = \chi_{36,1}, \varphi_{34,1}$
33		0	$3640_1 = \chi_{41+}, \varphi_{39+}$
34		0	$4368_1 = \chi_{44+}, \varphi_{41+}$
35		0	$3276_1 = \chi_{46,0}, \varphi_{44,0}$
$36 = \overline{35}$		0	$3276_2 = \chi_{46,1}, \varphi_{44,1}$
37		0	$7488_1 = \chi_{48+}, \varphi_{45+}$
38		0	$7800_1 = \chi_{50+}, \varphi_{47+}$
39		0	$11648_1 = \chi_{53+}, \varphi_{49+}$
40		0	$7488_2 = \chi_{55,0}, \varphi_{51,0}$
$41 = \overline{40}$		0	$7488_3 = \chi_{55,1}, \varphi_{51,1}$

Block 1:	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{4,0}$	$\varphi_{4,1}$	$\varphi_{5,0}$	$\varphi_{5,1}$	$\varphi_{6,0}$	$\varphi_{6,1}$	$\varphi_{9,0}$	$\varphi_{9,1}$	$\varphi_{24,0}$	$\varphi_{24,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.	.	.
$1_2 = \chi_{1,1}$.	1	.	.	.	.	.	.	.	.	.	.
$300_1 = \chi_{4,0}$.	.	1	.	.	.	.	.	.	.	.	.
$300_2 = \chi_{4,1}$.	.	.	1	.	.	.	.	.	.	.	.
$300_3 = \chi_{5,0}$	1	.	.	.	.	.	.	.
$300_4 = \chi_{5,1}$	1	.	.	.	.	.	.
$350_1 = \chi_{6,0}$	1	.	.	.	.	.	1	.	.	.	.	.
$350_2 = \chi_{6,1}$.	1	.	.	.	.	.	1	.	.	.	.
$378_1 = \chi_{9,0}$	1	.	.	.
$378_2 = \chi_{9,1}$	1	.	.
$4096_1 = \chi_{28,0}$	1	.	.	.	1	.
$4096_2 = \chi_{28,1}$	1	.	.	.	1
$9450_1 = \chi_{30+}$.	.	1	1	1	1	.	.	1	1	1	1

$$\begin{array}{ll}
\varphi_{1,0} = 1_1 & \varphi_{6,0} = 349_1 \\
\varphi_{1,1} = 1_2 & \varphi_{6,1} = 349_2 \\
\varphi_{4,0} = 300_1 & \varphi_{9,0} = 378_1 \\
\varphi_{4,1} = 300_2 & \varphi_{9,1} = 378_2 \\
\varphi_{5,0} = 300_3 & \varphi_{24,0} = 3747_1 \\
\varphi_{5,1} = 300_4 & \varphi_{24,1} = 3747_2
\end{array}$$

Block 29:	$\varphi_{31,0}$	$\varphi_{31,1}$	$\varphi_{35,0}$	$\varphi_{35,1}$	$\varphi_{36,0}$	$\varphi_{36,1}$	$\varphi_{37,0}$	$\varphi_{37,1}$	$\varphi_{38,0}$	$\varphi_{38,1}$	$\varphi_{43,0}$
$12_1 = \chi_{33,0}$	1	.	.	.	.	.	.	.	.	.	.
$12_2 = \chi_{33,1}$.	1	.	.	.	.	.	.	.	.	.
$560_1 = \chi_{37,0}$	1	.	1	.	.	.	.	.	.	.	.
$560_2 = \chi_{37,1}$.	1	.	1	.	.	.	.	.	.	.
$1260_1 = \chi_{38,0}$	1	.	.
$1260_2 = \chi_{38,1}$	1	.
$3600_1 = \chi_{39+}$.	.	1	1	.	.	1	1	.	.	.
$2016_1 = \chi_{43,0}$	1	.	1	.	.	.	.
$2016_2 = \chi_{43,1}$	1	.	1	.	.	.
$3600_2 = \chi_{47,0}$	1	.	.	.	.	.
$3600_3 = \chi_{47,1}$	1	.	.	.	.	.	1
$4096_3 = \chi_{52,0}$	1	.
$4096_4 = \chi_{52,1}$	1	.	1

(Block 29:)	$\varphi_{43,1}$	
$12_1 = \chi_{33,0}$.	$\varphi_{31,0} = 12_1$
$12_2 = \chi_{33,1}$.	$\varphi_{31,1} = 12_2$
$560_1 = \chi_{37,0}$.	$\varphi_{35,0} = 548_1$
$560_2 = \chi_{37,1}$.	$\varphi_{35,1} = 548_2$
$1260_1 = \chi_{38,0}$.	$\varphi_{36,0} = 764_1$
$1260_2 = \chi_{38,1}$.	$\varphi_{36,1} = 764_2$
$3600_1 = \chi_{39+}$.	$\varphi_{37,0} = 1252_1$
$2016_1 = \chi_{43,0}$.	$\varphi_{37,1} = 1252_2$
$2016_2 = \chi_{43,1}$.	$\varphi_{38,0} = 1260_1$
$3600_2 = \chi_{47,0}$	1	$\varphi_{38,1} = 1260_2$
$3600_3 = \chi_{47,1}$.	$\varphi_{43,0} = 2836_1$
$4096_3 = \chi_{52,0}$	1	$\varphi_{43,1} = 2836_2$
$4096_4 = \chi_{52,1}$.	