

## $J_2 \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	$7 \times 6$
	2	0	$14_1 = \chi_2, \varphi_2$
	3	0	$14_2 = \chi_3, \varphi_3$
	4	0	$21_1 = \chi_4, \varphi_4$
	5	0	$21_2 = \chi_5, \varphi_5$
	6	0	$63_1 = \chi_7, \varphi_7$
	7	0	$70_1 = \chi_8, \varphi_8$
	8	0	$70_2 = \chi_9, \varphi_9$
	9	0	$126_1 = \chi_{11}, \varphi_{13}$
	10	0	$175_1 = \chi_{13}, \varphi_{14}$
	11	0	$189_1 = \chi_{14}, \varphi_{15}$
	12	0	$189_2 = \chi_{15}, \varphi_{16}$
	13	0	$224_1 = \chi_{16}, \varphi_{18}$

	blocks	defect	matrix
	14	0	$224_2 = \chi_{17}, \varphi_{19}$
	15	0	$336_1 = \chi_{21}, \varphi_{20}$
$2.G :$	16	1	$7 \times 6$
	17	0	$14_3 = \chi_{24}, \varphi_{23}$
	18	0	$56_1 = \chi_{27}, \varphi_{26}$
	19	0	$56_2 = \chi_{28}, \varphi_{27}$
	20	0	$84_1 = \chi_{31}, \varphi_{30}$
	21	0	$126_2 = \chi_{32}, \varphi_{31}$
	22	0	$126_3 = \chi_{33}, \varphi_{32}$
	23	0	$252_1 = \chi_{35}, \varphi_{33}$
	24	0	$336_2 = \chi_{36}, \varphi_{34}$
	25	0	$350_1 = \chi_{37}, \varphi_{35}$
	26	0	$448_1 = \chi_{38}, \varphi_{36}$

<b>Block 1:</b>	$\varphi_1$	$\varphi_6$	$\varphi_{10}$	$\varphi_{11}$	$\varphi_{12}$	$\varphi_{17}$
$1_1 = \chi_1$	1	.	.	.	.	.
$36_1 = \chi_6$	.	1	.	.	.	.
$90_1 = \chi_{10}$	1	.	1	.	.	.
$160_1 = \chi_{12}$	.	1	.	.	1	.
$225_1 = \chi_{18}$	.	.	.	1	1	.
$288_1 = \chi_{19}$	.	.	1	.	.	1
$300_1 = \chi_{20}$	.	.	.	1	.	1

$$\begin{aligned}
 \varphi_1 &= 1_1 \\
 \varphi_6 &= 36_1 \\
 \varphi_{10} &= 89_1 \\
 \varphi_{11} &= 101_1 \\
 \varphi_{12} &= 124_1 \\
 \varphi_{17} &= 199_1
 \end{aligned}$$

<b>Block 16:</b>	$\varphi_{21}$	$\varphi_{22}$	$\varphi_{24}$	$\varphi_{25}$	$\varphi_{28}$	$\varphi_{29}$
$6_1 = \chi_{22}$	1	.	.	.	.	.
$6_2 = \chi_{23}$	.	1	.	.	.	.
$50_1 = \chi_{25}$	.	.	1	.	.	.
$50_2 = \chi_{26}$	.	.	.	1	.	.
$64_1 = \chi_{29}$	.	1	.	.	1	.
$64_2 = \chi_{30}$	1	.	.	.	.	1
$216_1 = \chi_{34}$	.	.	1	1	1	1

$$\begin{aligned}
 \varphi_{21} &= 6_1 \\
 \varphi_{22} &= 6_2 \\
 \varphi_{24} &= 50_1 \\
 \varphi_{25} &= 50_2 \\
 \varphi_{28} &= 58_1 \\
 \varphi_{29} &= 58_2
 \end{aligned}$$