

$J_4 \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	5×3
	2	1	5×3
	3	1	5×3
	4	1	5×3
	5	1	5×3
	6	1	5×3
	7	1	5×3
	8	0	$35411145_1 = \chi_{19}, \varphi_{11}$
	9	0	$35411145_2 = \chi_{20}, \varphi_{12}$
	10	0	$95288172_1 = \chi_{21}, \varphi_{13}$
	11	0	$230279749_1 = \chi_{22}, \varphi_{14}$
	12	0	$259775040_1 = \chi_{23}, \varphi_{15}$
	13	0	$259775040_2 = \chi_{24}, \varphi_{16}$
	14	0	$300364890_1 = \chi_{25}, \varphi_{17}$
	15	0	$460559498_1 = \chi_{29}, \varphi_{20}$
	16	0	$690839247_1 = \chi_{31}, \varphi_{22}$
	17	0	$786127419_1 = \chi_{32}, \varphi_{23}$
	18	0	$786127419_2 = \chi_{33}, \varphi_{24}$
	19	0	$786127419_3 = \chi_{34}, \varphi_{25}$
	20	0	$885257856_1 = \chi_{36}, \varphi_{27}$
	21	0	$885257856_2 = \chi_{37}, \varphi_{28}$
	22	0	$1016407168_1 = \chi_{38}, \varphi_{29}$
	23	0	$1016407168_2 = \chi_{39}, \varphi_{30}$
	24	0	$1445942610_1 = \chi_{46}, \varphi_{36}$
	25	0	$1445942610_2 = \chi_{47}, \varphi_{37}$
	26	0	$1445942610_3 = \chi_{48}, \varphi_{38}$
	27	0	$1842237992_1 = \chi_{51}, \varphi_{40}$
	28	0	$1981808640_1 = \chi_{53}, \varphi_{42}$
	29	0	$1981808640_2 = \chi_{54}, \varphi_{43}$
	30	0	$1981808640_3 = \chi_{55}, \varphi_{44}$
	31	0	$2001151845_1 = \chi_{56}, \varphi_{45}$
	32	0	$2001151845_2 = \chi_{57}, \varphi_{46}$
	33	0	$2001151845_3 = \chi_{58}, \varphi_{47}$
	34	0	$2727495848_1 = \chi_{61}, \varphi_{48}$

Block 1:	φ_1	φ_4	φ_5
$1_1 = \chi_1$	1	.	.
$887778_1 = \chi_6$	.	1	.
$887778_2 = \chi_7$	.	1	.
$889111_1 = \chi_8$	1	.	1
$1776888_1 = \chi_{11}$	.	1	1

$$\begin{aligned}\varphi_1 &= 1_1 \\ \varphi_4 &= 887778_1 \\ \varphi_5 &= 889110_1\end{aligned}$$

Block 2:	φ_2	φ_{19}	φ_{26}
$1333_1 = \chi_2$	1	.	.
$1333_2 = \chi_3$	1	.	.
$393877506_1 = \chi_{27}$	.	1	.
$789530568_1 = \chi_{35}$	1	.	1
$1183406741_2 = \chi_{44}$	.	1	1

$$\begin{aligned}\varphi_2 &= 1333_1 \\ \varphi_{19} &= 393877506_1 \\ \varphi_{26} &= 789529235_1\end{aligned}$$

Block 3:	φ_3	φ_{31}	φ_{34}
$299367_1 = \chi_4$	1	.	.
$299367_2 = \chi_5$	1	.	.
$1085604531_1 = \chi_{40}$	.	1	.
$1182518964_1 = \chi_{42}$	1	.	1
$2267824128_1 = \chi_{59}$	.	1	1

$$\begin{aligned}\varphi_3 &= 299367_1 \\ \varphi_{31} &= 1085604531_1 \\ \varphi_{34} &= 1182219597_1\end{aligned}$$

Block 4:	φ_6	φ_{35}	φ_{39}
$1187145_1 = \chi_9$	1	.	.
$1187145_2 = \chi_{10}$	1	.	.
$1184295852_1 = \chi_{45}$	.	1	.
$1509863773_1 = \chi_{49}$	1	.	1
$2692972480_1 = \chi_{60}$	.	1	1

$$\begin{aligned}\varphi_6 &= 1187145_1 \\ \varphi_{35} &= 1184295852_1 \\ \varphi_{39} &= 1508676628_1\end{aligned}$$

Block 5:	φ_7	φ_{21}	φ_{32}
$3403149_1 = \chi_{12}$	1	.	.
$3403149_2 = \chi_{13}$	1	.	.
$493456605_1 = \chi_{30}$	.	1	.
$1089007680_1 = \chi_{41}$	1	.	1
$1579061136_1 = \chi_{50}$	.	1	1

$$\begin{aligned}\varphi_7 &= 3403149_1 \\ \varphi_{21} &= 493456605_1 \\ \varphi_{32} &= 1085604531_2\end{aligned}$$

Block 6:	φ_8	φ_{10}	φ_{18}
$4290927_1 = \chi_{14}$	1	.	.
$32897107_1 = \chi_{17}$	.	1	.
$32897107_2 = \chi_{18}$	.	1	.
$366159104_1 = \chi_{26}$	1	.	1
$394765284_1 = \chi_{28}$	.	1	1

$$\begin{aligned} \varphi_8 &= 4290927_1 \\ \varphi_{10} &= 32897107_1 \\ \varphi_{18} &= 361868177_1 \end{aligned}$$

Block 7:	φ_9	φ_{33}	φ_{41}
$32307363_1 = \chi_{15}$	1	.	.
$32307363_2 = \chi_{16}$	1	.	.
$1183406741_1 = \chi_{43}$	1	1	.
$1903741279_1 = \chi_{52}$	.	.	1
$3054840657_1 = \chi_{62}$	.	1	1

$$\begin{aligned} \varphi_9 &= 32307363_1 \\ \varphi_{33} &= 1151099378_1 \\ \varphi_{41} &= 1903741279_1 \end{aligned}$$