

# $J_4 \pmod{5}$

	blocks	defect	matrix
$G :$	1	1	$5 \times 4$
	2	1	$5 \times 4$
	$3 = \bar{2}$	1	$5 \times 4$
	4	1	$5 \times 4$
	5	0	$1187145_1 = \chi_9, \varphi_9$
	$6 = \bar{5}$	0	$1187145_2 = \chi_{10}, \varphi_{10}$
	7	1	$5 \times 4$
	8	1	$5 \times 4$
	9	0	$35411145_1 = \chi_{19}, \varphi_{17}$
	10	0	$35411145_2 = \chi_{20}, \varphi_{18}$
	11	1	$5 \times 4$
	12	1	$4 \times 2$
	13	0	$259775040_1 = \chi_{23}, \varphi_{21}$
	14	0	$259775040_2 = \chi_{24}, \varphi_{22}$
	15	0	$300364890_1 = \chi_{25}, \varphi_{23}$
	16	0	$493456605_1 = \chi_{30}, \varphi_{28}$
	17	1	$4 \times 2$
	18	0	$1089007680_1 = \chi_{41}, \varphi_{38}$
	19	0	$1445942610_1 = \chi_{46}, \varphi_{40}$
	20	0	$1445942610_2 = \chi_{47}, \varphi_{41}$
	21	0	$1445942610_3 = \chi_{48}, \varphi_{42}$
	22	0	$1981808640_1 = \chi_{53}, \varphi_{44}$
	23	0	$1981808640_2 = \chi_{54}, \varphi_{45}$
	24	0	$1981808640_3 = \chi_{55}, \varphi_{46}$
	25	0	$2001151845_1 = \chi_{56}, \varphi_{47}$
	26	0	$2001151845_2 = \chi_{57}, \varphi_{48}$
	27	0	$2001151845_3 = \chi_{58}, \varphi_{49}$
	28	0	$2692972480_1 = \chi_{60}, \varphi_{51}$

<b>Block 1:</b>	$\varphi_1$	$\varphi_{26}$	$\varphi_{27}$	$\varphi_{34}$	
$1_1 = \chi_1$	1	.	.	.	$\varphi_1 = 1_1$
$393877506_1 = \chi_{27}$	.	1	.	.	$\varphi_{26} = 393877506_1$
$394765284_1 = \chi_{28}$	1	.	1	.	$\varphi_{27} = 394765283_1$
$1182518964_1 = \chi_{42}$	.	1	.	1	$\varphi_{34} = 788641458_1$
$1183406741_1 = \chi_{43}$	.	.	1	1	

<b>Block 2:</b>	$\varphi_2$	$\varphi_4$	$\varphi_6$	$\varphi_{15}$
$1333_1 = \chi_2$	1	.	.	.
$299367_1 = \chi_4$	1	1	.	.
$887778_1 = \chi_6$	.	.	1	.
$32307363_1 = \chi_{15}$	.	1	.	1
$32897107_1 = \chi_{17}$	.	.	1	1

$$\begin{aligned}\varphi_2 &= 1333_1 \\ \varphi_4 &= 298034_1 \\ \varphi_6 &= 887778_1 \\ \varphi_{15} &= 32009329_1\end{aligned}$$

<b>Block 3:</b>	$\varphi_3$	$\varphi_5$	$\varphi_7$	$\varphi_{16}$
$1333_2 = \chi_3$	1	.	.	.
$299367_2 = \chi_5$	1	1	.	.
$887778_2 = \chi_7$	.	.	1	.
$32307363_2 = \chi_{16}$	.	1	.	1
$32897107_2 = \chi_{18}$	.	.	1	1

$$\begin{aligned}\varphi_3 &= 1333_2 \\ \varphi_5 &= 298034_2 \\ \varphi_7 &= 887778_2 \\ \varphi_{16} &= 32009329_2\end{aligned}$$

<b>Block 4:</b>	$\varphi_8$	$\varphi_{24}$	$\varphi_{30}$	$\varphi_{39}$
$889111_1 = \chi_8$	1	.	.	.
$366159104_1 = \chi_{26}$	1	1	.	.
$1085604531_1 = \chi_{40}$	.	1	1	.
$1183406741_2 = \chi_{44}$	.	.	.	1
$1903741279_1 = \chi_{52}$	.	.	1	1

$$\begin{aligned}\varphi_8 &= 889111_1 \\ \varphi_{24} &= 365269993_1 \\ \varphi_{30} &= 720334538_1 \\ \varphi_{39} &= 1183406741_1\end{aligned}$$

<b>Block 7:</b>	$\varphi_{11}$	$\varphi_{12}$	$\varphi_{35}$	$\varphi_{50}$
$1776888_1 = \chi_{11}$	1	.	.	.
$4290927_1 = \chi_{14}$	1	1	.	.
$789530568_1 = \chi_{35}$	.	.	1	.
$2267824128_1 = \chi_{59}$	.	1	.	1
$3054840657_1 = \chi_{62}$	.	.	1	1

$$\begin{aligned}\varphi_{11} &= 1776888_1 \\ \varphi_{12} &= 2514039_1 \\ \varphi_{35} &= 789530568_1 \\ \varphi_{50} &= 2265310089_1\end{aligned}$$

<b>Block 8:</b>	$\varphi_{13}$	$\varphi_{14}$	$\varphi_{32}$	$\varphi_{33}$
$3403149_1 = \chi_{12}$	1	.	.	.
$3403149_2 = \chi_{13}$	.	1	.	.
$786127419_2 = \chi_{33}$	.	.	1	.
$786127419_3 = \chi_{34}$	.	.	.	1
$1579061136_1 = \chi_{50}$	1	1	1	1

$$\begin{aligned}\varphi_{13} &= 3403149_1 \\ \varphi_{14} &= 3403149_2 \\ \varphi_{32} &= 786127419_2 \\ \varphi_{33} &= 786127419_3\end{aligned}$$

<b>Block 11:</b>	$\varphi_{19}$	$\varphi_{25}$	$\varphi_{29}$	$\varphi_{36}$	
$95288172_1 = \chi_{21}$	1	.	.	.	$\varphi_{19} = 95288172_1$
$460559498_1 = \chi_{29}$	1	1	.	.	$\varphi_{25} = 365271326_1$
$690839247_1 = \chi_{31}$	.	.	1	.	$\varphi_{29} = 690839247_1$
$1184295852_1 = \chi_{45}$	.	1	.	1	$\varphi_{36} = 819024526_1$
$1509863773_1 = \chi_{49}$	.	.	1	1	

<b>Block 12:</b>	$\varphi_{20}$	$\varphi_{31}$	
$230279749_1 = \chi_{22}$	1	.	$\varphi_{20} = 230279749_1$
$786127419_1 = \chi_{32}$	.	1	$\varphi_{31} = 786127419_1$
$1016407168_1 = \chi_{38}$	1	1	
$1016407168_2 = \chi_{39}$	1	1	

<b>Block 17:</b>	$\varphi_{37}$	$\varphi_{43}$	
$885257856_1 = \chi_{36}$	1	.	$\varphi_{37} = 885257856_1$
$885257856_2 = \chi_{37}$	1	.	$\varphi_{43} = 1842237992_1$
$1842237992_1 = \chi_{51}$	.	1	
$2727495848_1 = \chi_{61}$	1	1	