

$A_{12} \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	7×6
	2	1	7×6
	3	1	7×6
	4	1	5×3
	5	0	$154_1 = \chi_6, \varphi_6$
	6	0	$462_1 = \chi_{12}, \varphi_{12}$
	7	0	$462_2 = \chi_{13}, \varphi_{13}$
	8	0	$616_1 = \chi_{14}, \varphi_{15}$
	9	0	$945_1 = \chi_{16}, \varphi_{16}$
	10	0	$1050_1 = \chi_{17}, \varphi_{18}$
	$11 = \overline{10}$	0	$1050_2 = \chi_{18}, \varphi_{19}$
	12	0	$1155_1 = \chi_{19}, \varphi_{21}$
	13	0	$1925_1 = \chi_{27}, \varphi_{27}$
	14	0	$1925_2 = \chi_{28}, \varphi_{28}$
	15	0	$2079_1 = \chi_{29}, \varphi_{29}$
	16	0	$3080_1 = \chi_{34}, \varphi_{32}$
	17	0	$3696_1 = \chi_{37}, \varphi_{34}$
	18	0	$3850_1 = \chi_{38}, \varphi_{35}$
	$19 = \overline{18}$	0	$3850_2 = \chi_{39}, \varphi_{36}$
	20	0	$4158_1 = \chi_{40}, \varphi_{37}$
	21	0	$5775_1 = \chi_{43}, \varphi_{38}$
$2.G :$	22	1	5×3
	23	1	7×6
	24	1	7×6
	25	0	$1792_1 = \chi_{56}, \varphi_{51}$
	26	0	$5600_1 = \chi_{62}, \varphi_{55}$
	27	0	$7392_1 = \chi_{64}, \varphi_{56}$

Block 1:	φ_1	φ_5	φ_{11}	φ_{24}	φ_{25}	φ_{30}	
$1_1 = \chi_1$	1	.	.	.	.	.	$\varphi_1 = 1_1$
$132_1 = \chi_5$	1	1	.	.	.	.	$\varphi_5 = 131_1$
$330_1 = \chi_{11}$	.	.	1	.	.	.	$\varphi_{11} = 330_1$
$1485_1 = \chi_{24}$	.	1	.	1	.	.	$\varphi_{24} = 1354_1$
$1728_1 = \chi_{26}$	.	.	1	.	1	.	$\varphi_{25} = 1398_1$
$3520_1 = \chi_{35}$	.	.	.	1	.	1	$\varphi_{30} = 2166_1$
$3564_1 = \chi_{36}$	.	.	.	.	1	1	

Block 2:	φ_2	φ_7	φ_9	φ_{17}	φ_{31}	φ_{33}	
$11_1 = \chi_2$	1	.	.	.	.	.	$\varphi_2 = 11_1$
$165_1 = \chi_7$	.	1	.	.	.	.	$\varphi_7 = 165_1$
$297_1 = \chi_9$	1	.	1	.	.	.	$\varphi_9 = 286_1$
$1320_1 = \chi_{20}$	.	.	1	1	.	.	$\varphi_{17} = 1034_1$
$2376_1 = \chi_{31}$	.	1	.	.	1	.	$\varphi_{31} = 2211_1$
$4455_1 = \chi_{41}$	.	.	.	1	.	1	$\varphi_{33} = 3421_1$
$5632_1 = \chi_{42}$	.	.	.	.	1	1	

Block 3:	φ_3	φ_8	φ_{10}	φ_{14}	φ_{20}	φ_{26}	
$54_1 = \chi_3$	1	.	.	.	.	.	$\varphi_3 = 54_1$
$275_1 = \chi_8$	1	1	.	.	.	.	$\varphi_8 = 221_1$
$320_1 = \chi_{10}$	.	.	1	.	.	.	$\varphi_{10} = 320_1$
$891_1 = \chi_{15}$	.	.	1	1	.	.	$\varphi_{14} = 571_1$
$1650_1 = \chi_{25}$	.	.	.	1	1	.	$\varphi_{20} = 1079_1$
$2112_1 = \chi_{30}$	.	1	.	.	.	1	$\varphi_{26} = 1891_1$
$2970_1 = \chi_{33}$	.	.	.	.	1	1	

Block 4:	φ_4	φ_{22}	φ_{23}	
$55_1 = \chi_4$	1	.	.	$\varphi_4 = 55_1$
$1320_2 = \chi_{21}$	.	1	.	$\varphi_{22} = 1320_1$
$1320_3 = \chi_{22}$	.	1	.	$\varphi_{23} = 1353_1$
$1408_1 = \chi_{23}$	1	.	1	
$2673_1 = \chi_{32}$	.	1	1	

Block 22:	φ_{39}	φ_{48}	φ_{52}	
$32_1 = \chi_{44}$	1	.	.	$\varphi_{39} = 32_1$
$1760_1 = \chi_{51}$	.	1	.	$\varphi_{48} = 1760_1$
$2112_2 = \chi_{57}$	1	.	1	$\varphi_{52} = 2080_1$
$2112_3 = \chi_{58}$	1	.	1	
$3840_1 = \chi_{61}$	.	1	1	

Block 23:	φ_{40}	φ_{41}	φ_{46}	φ_{47}	φ_{53}	φ_{54}
$160_1 = \chi_{45}$	1	.	.	.	.	.
$160_2 = \chi_{46}$	.	1	.	.	.	.
$1408_2 = \chi_{49}$	.	.	1	.	.	.
$1408_3 = \chi_{50}$	.	.	.	1	.	.
$2640_1 = \chi_{59}$	.	1	.	.	.	1
$2640_2 = \chi_{60}$	1	.	.	.	1	.
$7776_1 = \chi_{65}$	.	.	1	1	1	1

$$\begin{aligned}
\varphi_{40} &= 160_1 \\
\varphi_{41} &= 160_2 \\
\varphi_{46} &= 1408_1 \\
\varphi_{47} &= 1408_2 \\
\varphi_{53} &= 2480_1 \\
\varphi_{54} &= 2480_2
\end{aligned}$$

Block 24:	φ_{42}	φ_{43}	φ_{44}	φ_{45}	φ_{49}	φ_{50}
$704_1 = \chi_{47}$	1	.	.	.	.	.
$704_2 = \chi_{48}$	.	1	.	.	.	.
$1760_2 = \chi_{52}$	.	1	1	.	.	.
$1760_3 = \chi_{53}$	1	.	.	1	.	.
$1760_4 = \chi_{54}$	.	.	.	.	1	.
$1760_5 = \chi_{55}$	.	.	.	.	.	1
$5632_2 = \chi_{63}$	.	.	1	1	1	1

$$\begin{aligned}
\varphi_{42} &= 704_1 \\
\varphi_{43} &= 704_2 \\
\varphi_{44} &= 1056_1 \\
\varphi_{45} &= 1056_2 \\
\varphi_{49} &= 1760_2 \\
\varphi_{50} &= 1760_3
\end{aligned}$$