

$A_{13} \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	7×6
	2	1	7×6
	3	1	7×6
	4	1	7×6
	5	1	7×6
	6	1	5×3
	7	0	$462_1 = \chi_{10}, \varphi_{10}$
	8	0	$462_2 = \chi_{11}, \varphi_{11}$
	9	0	$1365_1 = \chi_{17}, \varphi_{18}$
	10	0	$3003_1 = \chi_{22}, \varphi_{27}$
	11	0	$3640_1 = \chi_{27}, \varphi_{29}$
	12	0	$4004_1 = \chi_{28}, \varphi_{30}$
	13	0	$5005_1 = \chi_{33}, \varphi_{33}$
	14	0	$6006_1 = \chi_{36}, \varphi_{35}$

	blocks	defect	matrix	
	15	0	$7371_1 = \chi_{39}, \varphi_{38}$	
	16	0	$8008_1 = \chi_{41}, \varphi_{39}$	
	$17 = \overline{16}$	0	$8008_2 = \chi_{42}, \varphi_{40}$	
	18	0	$9009_1 = \chi_{44}, \varphi_{43}$	
	19	0	$12012_1 = \chi_{49}, \varphi_{45}$	
	20	0	$12012_2 = \chi_{50}, \varphi_{46}$	
	21	0	$15015_1 = \chi_{52}, \varphi_{48}$	
	$2.G :$	22	1	7×6
		23	1	5×3
		24	1	5×3
25		1	7×6	
26		0	$4928_1 = \chi_{64}, \varphi_{60}$	
27		0	$16016_1 = \chi_{79}, \varphi_{68}$	
$28 = \overline{27}$		0	$16016_2 = \chi_{80}, \varphi_{69}$	

Block 1:	φ_1	φ_{14}	φ_{17}	φ_{28}	φ_{32}	φ_{34}
$1_1 = \chi_1$	1	.	.	.	.	.
$792_1 = \chi_{14}$	.	1	.	.	.	.
$1287_1 = \chi_{16}$	1	.	1	.	.	.
$4290_1 = \chi_{30}$	.	1	.	1	.	.
$5720_1 = \chi_{35}$	.	.	1	.	1	.
$9360_1 = \chi_{45}$	.	.	.	1	.	1
$10296_1 = \chi_{46}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_1 &= 1_1 \\ \varphi_{14} &= 792_1 \\ \varphi_{17} &= 1286_1 \\ \varphi_{28} &= 3498_1 \\ \varphi_{32} &= 4434_1 \\ \varphi_{34} &= 5862_1 \end{aligned}$$

Block 2:	φ_2	φ_8	φ_{12}	φ_{37}	φ_{41}	φ_{47}
$12_1 = \chi_2$	1	.	.	.	.	.
$429_3 = \chi_9$	1	1	.	.	.	.
$495_1 = \chi_{12}$	.	.	1	.	.	.
$7800_1 = \chi_{40}$	.	.	1	1	.	.
$8580_1 = \chi_{43}$	.	1	.	.	1	.
$20592_1 = \chi_{54}$	.	.	.	1	.	1
$21450_1 = \chi_{55}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_2 &= 12_1 \\ \varphi_8 &= 417_1 \\ \varphi_{12} &= 495_1 \\ \varphi_{37} &= 7305_1 \\ \varphi_{41} &= 8163_1 \\ \varphi_{47} &= 13287_1 \end{aligned}$$

Block 3:	φ_3	φ_{13}	φ_{19}	φ_{24}	φ_{26}	φ_{42}
$65_1 = \chi_3$	1	.	.	.	.	.
$572_1 = \chi_{13}$	1	1	.	.	.	.
$1430_1 = \chi_{18}$	.	.	1	.	.	.
$3432_2 = \chi_{24}$	.	1	.	.	1	.
$4212_1 = \chi_{29}$	.	.	1	1	.	.
$11440_1 = \chi_{47}$	.	.	.	1	.	1
$11583_1 = \chi_{48}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_3 &= 65_1 \\ \varphi_{13} &= 507_1 \\ \varphi_{19} &= 1430_1 \\ \varphi_{24} &= 2782_1 \\ \varphi_{26} &= 2925_1 \\ \varphi_{42} &= 8658_1 \end{aligned}$$

Block 4:	φ_4	φ_6	φ_{22}	φ_{25}	φ_{36}	φ_{44}
$66_1 = \chi_4$	1	.	.	.	.	.
$220_1 = \chi_6$	.	1	.	.	.	.
$2860_1 = \chi_{21}$	1	.	.	1	.	.
$5148_1 = \chi_{34}$	.	.	1	1	.	.
$6864_1 = \chi_{38}$	.	1	.	.	1	.
$12870_1 = \chi_{51}$	.	.	1	.	.	1
$17160_1 = \chi_{53}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_4 &= 66_1 \\ \varphi_6 &= 220_1 \\ \varphi_{22} &= 2354_1 \\ \varphi_{25} &= 2794_1 \\ \varphi_{36} &= 6644_1 \\ \varphi_{44} &= 10516_1 \end{aligned}$$

Block 5:	φ_5	φ_7	φ_{15}	φ_{16}	φ_{21}	φ_{23}
$208_1 = \chi_5$	1	.	.	.	.	.
$429_2 = \chi_8$	1	1	.	.	.	.
$936_1 = \chi_{15}$	.	.	1	.	.	.
$2574_2 = \chi_{20}$	.	1	.	.	1	.
$3432_1 = \chi_{23}$	.	.	1	.	.	1
$3432_3 = \chi_{25}$	.	.	.	1	1	.
$3575_1 = \chi_{26}$	.	.	.	1	.	1

$$\begin{aligned} \varphi_5 &= 208_1 \\ \varphi_7 &= 221_1 \\ \varphi_{15} &= 936_1 \\ \varphi_{16} &= 1079_1 \\ \varphi_{21} &= 2353_1 \\ \varphi_{23} &= 2496_1 \end{aligned}$$

Block 6:	φ_9	φ_{20}	φ_{31}
$429_1 = \chi_7$	1	.	.
$2574_1 = \chi_{19}$	1	1	.
$4290_2 = \chi_{31}$	.	.	1
$4290_3 = \chi_{32}$	.	.	1
$6435_1 = \chi_{37}$	.	1	1

$$\begin{aligned} \varphi_9 &= 429_1 \\ \varphi_{20} &= 2145_1 \\ \varphi_{31} &= 4290_1 \end{aligned}$$

Block 22:	φ_{49}	φ_{50}	φ_{53}	φ_{54}	φ_{65}	φ_{66}	
$32_1 = \chi_{56}$	1	.	.	.	.	.	$\varphi_{49} = 32_1$
$32_2 = \chi_{57}$	.	1	.	.	.	.	$\varphi_{50} = 32_2$
$4224_1 = \chi_{62}$	1	1	1	1	.	.	$\varphi_{53} = 2080_1$
$9152_4 = \chi_{69}$	.	.	.	.	1	.	$\varphi_{54} = 2080_2$
$9152_5 = \chi_{70}$	.	.	.	.	.	1	$\varphi_{65} = 9152_2$
$11232_3 = \chi_{74}$	.	.	1	.	1	.	$\varphi_{66} = 9152_3$
$11232_4 = \chi_{75}$	.	.	.	1	.	1	

Block 23:	φ_{51}	φ_{57}	φ_{64}	
$352_1 = \chi_{58}$	1	.	.	$\varphi_{51} = 352_1$
$4576_1 = \chi_{63}$	.	1	.	$\varphi_{57} = 4576_1$
$9504_1 = \chi_{71}$	1	.	1	$\varphi_{64} = 9152_1$
$13728_2 = \chi_{77}$	.	1	1	
$13728_3 = \chi_{78}$	.	1	1	

Block 24:	φ_{52}	φ_{63}	φ_{67}	
$1728_1 = \chi_{59}$	1	.	.	$\varphi_{52} = 1728_1$
$8800_1 = \chi_{65}$	1	1	.	$\varphi_{63} = 7072_1$
$13728_1 = \chi_{76}$	.	.	1	$\varphi_{67} = 13728_1$
$20800_1 = \chi_{81}$	.	1	1	
$20800_2 = \chi_{82}$	.	1	1	

Block 25:	φ_{55}	φ_{56}	φ_{58}	φ_{59}	φ_{61}	φ_{62}	
$2496_1 = \chi_{60}$	1	.	.	.	.	.	$\varphi_{55} = 2496_2$
$2496_2 = \chi_{61}$	.	1	.	.	.	.	$\varphi_{56} = 2496_3$
$9152_1 = \chi_{66}$	.	.	1	1	.	.	$\varphi_{58} = 4576_2$
$9152_2 = \chi_{67}$	1	.	.	.	1	.	$\varphi_{59} = 4576_3$
$9152_3 = \chi_{68}$	.	1	.	.	.	1	$\varphi_{61} = 6656_1$
$11232_1 = \chi_{72}$	.	.	.	1	.	1	$\varphi_{62} = 6656_2$
$11232_2 = \chi_{73}$	.	.	1	.	1	.	