

$A_{16} \pmod{7}$

	blocks	defect	matrix
$G :$	1	2	35×27
	2	1	7×6
	3	1	7×6
	4	1	7×6
	5	1	7×6
	6	1	5×3
	7	0	$2548_1 = \chi_{11}, \varphi_{12}$
	8	1	7×6
	9	1	7×6
	10	1	5×3
	11	1	7×6
	12	0	$21021_1 = \chi_{29}, \varphi_{29}$
	$13 = \overline{12}$	0	$21021_2 = \chi_{30}, \varphi_{30}$
	14	0	$38220_1 = \chi_{39}, \varphi_{44}$
	15	0	$43120_1 = \chi_{41}, \varphi_{45}$
	16	0	$76440_1 = \chi_{52}, \varphi_{55}$
	17	0	$91728_1 = \chi_{57}, \varphi_{57}$
	18	0	$112112_1 = \chi_{60}, \varphi_{59}$
	19	0	$112112_2 = \chi_{61}, \varphi_{60}$
	20	0	$114660_1 = \chi_{63}, \varphi_{61}$
	21	0	$140140_1 = \chi_{68}, \varphi_{69}$
	22	0	$155232_1 = \chi_{71}, \varphi_{72}$
	23	0	$168168_1 = \chi_{72}, \varphi_{73}$
	24	0	$194040_1 = \chi_{77}, \varphi_{76}$
	25	0	$202125_1 = \chi_{81}, \varphi_{80}$
	$26 = \overline{25}$	0	$202125_2 = \chi_{82}, \varphi_{81}$
	27	0	$206388_1 = \chi_{83}, \varphi_{82}$
	28	0	$210210_1 = \chi_{84}, \varphi_{83}$
	29	0	$280280_1 = \chi_{90}, \varphi_{87}$
	30	0	$280280_2 = \chi_{91}, \varphi_{88}$
	31	0	$305760_1 = \chi_{94}, \varphi_{91}$
	32	0	$318500_1 = \chi_{95}, \varphi_{92}$
	33	0	$336336_1 = \chi_{97}, \varphi_{93}$
	34	0	$448448_1 = \chi_{105}, \varphi_{96}$
	35	0	$464373_1 = \chi_{106}, \varphi_{97}$
	$36 = \overline{35}$	0	$464373_2 = \chi_{107}, \varphi_{98}$
	37	0	$515970_1 = \chi_{111}, \varphi_{101}$
	38	0	$630630_1 = \chi_{116}, \varphi_{102}$
	39	0	$630630_2 = \chi_{117}, \varphi_{103}$

[illegible]

(Block 1:)	φ_{36}	φ_{38}	φ_{39}	φ_{41}	φ_{42}	φ_{43}	φ_{49}	φ_{50}	φ_{52}	φ_{67}	φ_{71}	φ_{74}	φ_{78}
$1_1 = \chi_1$
$15_1 = \chi_2$
$104_1 = \chi_3$
$440_1 = \chi_5$
$1430_1 = \chi_{10}$
$2640_1 = \chi_{12}$
$3432_1 = \chi_{14}$
$3900_1 = \chi_{16}$
$6435_1 = \chi_{19}$
$14300_1 = \chi_{25}$
$16848_1 = \chi_{26}$
$24960_1 = \chi_{34}$
$36608_1 = \chi_{38}$.	1	.	.	.	.	.	.	.	.	.	.	.
$42120_1 = \chi_{40}$.	.	1	.	.	.	.	.	.	.	.	.	.
$45760_1 = \chi_{42}$.	.	.	1	.	.	.	.	.	.	.	.	.
$51480_1 = \chi_{43}$	1	.	.	.	.	.	.	.	.
$68640_1 = \chi_{47}$	1	.	.	.	.
$71500_1 = \chi_{49}$	1	.	.	.	.	.	.	.
$82368_1 = \chi_{54}$.	.	1	.	.	.	1	.	.	.	.	.	.
$85800_1 = \chi_{55}$.	1	.	1	.	.	.	.	.	.	.	.	.
$91520_1 = \chi_{56}$	1	.	.	.	.	.	.	.	1	.	.	.	.
$105600_1 = \chi_{59}$.	.	.	1	.	1	.	.	.	.	.	.	.
$114400_1 = \chi_{62}$	1	1	.	.	.	.	.
$115830_1 = \chi_{64}$.	1	.	.	.	.	.	1	.	.	.	.	.
$171600_1 = \chi_{73}$	1	.	.	.	.	1	.	.	.
$231660_1 = \chi_{85}$	1	.	.	.	.	.	.	.	.	.	.	.	.
$266240_1 = \chi_{89}$	1	.	.	1	.
$292864_1 = \chi_{92}$	1	1	.	.	.	.	.	.	.
$337920_1 = \chi_{98}$.	.	1	.	.	.	1	1	.	.	.	.	1
$411840_1 = \chi_{101}$	1	.	.	.	.	1	.	.
$416988_1 = \chi_{102}$	1	.	.	.	.	.	.	.	1	1	.	1	.
$429000_1 = \chi_{103}$.	.	1	.	.	.	.	.	.	.	.	1	1
$429000_2 = \chi_{104}$	1	.	.	1	.	1
$549120_1 = \chi_{112}$	1	.	.	.	1	.	.	.	.	1	1	.	.
$673920_1 = \chi_{120}$	1	1	1	1

(Block 1:)	φ_{79}		
$1_1 = \chi_1$.		
$15_1 = \chi_2$.		
$104_1 = \chi_3$.		
$440_1 = \chi_5$.	$\varphi_1 =$	1_1
$1430_1 = \chi_{10}$.	$\varphi_2 =$	15_1
$2640_1 = \chi_{12}$.	$\varphi_3 =$	89_1
$3432_1 = \chi_{14}$.	$\varphi_5 =$	439_1
$3900_1 = \chi_{16}$.	$\varphi_9 =$	1341_1
$6435_1 = \chi_{19}$.	$\varphi_{13} =$	2551_1
$14300_1 = \chi_{25}$.	$\varphi_{14} =$	2993_1
$16848_1 = \chi_{26}$.	$\varphi_{16} =$	3461_1
$24960_1 = \chi_{34}$.	$\varphi_{19} =$	6435_1
$36608_1 = \chi_{38}$.	$\varphi_{23} =$	11749_1
$42120_1 = \chi_{40}$.	$\varphi_{25} =$	13387_1
$45760_1 = \chi_{42}$.	$\varphi_{28} =$	18066_1
$51480_1 = \chi_{43}$.	$\varphi_{33} =$	23254_1
$68640_1 = \chi_{47}$.	$\varphi_{36} =$	26861_1
$71500_1 = \chi_{49}$.	$\varphi_{38} =$	30173_1
$82368_1 = \chi_{54}$.	$\varphi_{39} =$	30371_1
$85800_1 = \chi_{55}$.	$\varphi_{41} =$	32373_1
$91520_1 = \chi_{56}$.	$\varphi_{42} =$	33413_1
$105600_1 = \chi_{59}$.	$\varphi_{43} =$	36586_1
$114400_1 = \chi_{62}$.	$\varphi_{49} =$	51997_1
$115830_1 = \chi_{64}$.	$\varphi_{50} =$	55968_1
$171600_1 = \chi_{73}$.	$\varphi_{52} =$	64644_1
$231660_1 = \chi_{85}$	1	$\varphi_{67} =$	136846_1
$266240_1 = \chi_{89}$.	$\varphi_{71} =$	150194_1
$292864_1 = \chi_{92}$	1	$\varphi_{74} =$	187296_1
$337920_1 = \chi_{98}$.	$\varphi_{78} =$	199584_1
$411840_1 = \chi_{101}$	1	$\varphi_{79} =$	201806_1
$416988_1 = \chi_{102}$.		
$429000_1 = \chi_{103}$.		
$429000_2 = \chi_{104}$.		
$549120_1 = \chi_{112}$	1		
$673920_1 = \chi_{120}$.		

Block 2:	φ_4	φ_{18}	φ_{37}	φ_{75}	φ_{89}	φ_{95}
$105_1 = \chi_4$	1	.	.	.	.	.
$5005_1 = \chi_{18}$	.	1	.	.	.	.
$30030_1 = \chi_{35}$	1	.	1	.	.	.
$197120_1 = \chi_{78}$	.	1	.	1	.	.
$320320_1 = \chi_{96}$	.	.	1	.	1	.
$600600_1 = \chi_{115}$	.	.	.	1	.	1
$698880_1 = \chi_{121}$	.	.	.	.	1	1

$$\begin{aligned}
\varphi_4 &= 105_1 \\
\varphi_{18} &= 5005_1 \\
\varphi_{37} &= 29925_1 \\
\varphi_{75} &= 192115_1 \\
\varphi_{89} &= 290395_1 \\
\varphi_{95} &= 408485_1
\end{aligned}$$

Block 3:	φ_6	φ_{15}	φ_{40}	φ_{63}	φ_{77}	φ_{94}
$455_1 = \chi_6$	1	.	.	.	.	.
$3003_1 = \chi_{13}$	.	1	.	.	.	.
$32032_1 = \chi_{36}$	1	.	1	.	.	.
$150150_2 = \chi_{70}$	.	.	1	1	.	.
$200200_2 = \chi_{80}$	.	1	.	.	1	.
$480480_1 = \chi_{108}$	.	.	.	1	.	1
$559104_1 = \chi_{113}$	.	.	.	.	1	1

$$\begin{aligned}
\varphi_6 &= 455_1 \\
\varphi_{15} &= 3003_1 \\
\varphi_{40} &= 31577_1 \\
\varphi_{63} &= 118573_1 \\
\varphi_{77} &= 197197_1 \\
\varphi_{94} &= 361907_1
\end{aligned}$$

Block 4:	φ_7	φ_{27}	φ_{34}	φ_{70}	φ_{99}	φ_{104}
$896_1 = \chi_7$	1	.	.	.	.	.
$18018_1 = \chi_{27}$	1	1	.	.	.	.
$24024_1 = \chi_{33}$	.	.	1	.	.	.
$173250_1 = \chi_{74}$	.	.	1	1	.	.
$500500_1 = \chi_{109}$	.	1	.	.	1	.
$819000_1 = \chi_{122}$	.	.	.	1	.	1
$1153152_1 = \chi_{123}$	.	.	.	.	1	1

$$\begin{aligned}
\varphi_7 &= 896_1 \\
\varphi_{27} &= 17122_1 \\
\varphi_{34} &= 24024_1 \\
\varphi_{70} &= 149226_1 \\
\varphi_{99} &= 483378_1 \\
\varphi_{104} &= 669774_1
\end{aligned}$$

Block 5:	φ_8	φ_{11}	φ_{51}	φ_{56}	φ_{86}	φ_{90}
$1260_1 = \chi_8$	1	.	.	.	.	.
$3640_1 = \chi_{15}$	1	1	.	.	.	.
$60060_2 = \chi_{45}$	.	1	1	.	.	.
$80640_1 = \chi_{53}$	.	.	.	1	.	.
$360360_1 = \chi_{99}$	.	.	.	1	1	.
$360360_2 = \chi_{100}$	.	.	1	.	.	1
$582400_1 = \chi_{114}$	.	.	.	.	1	1

$$\begin{aligned}
\varphi_8 &= 1260_1 \\
\varphi_{11} &= 2380_1 \\
\varphi_{51} &= 57680_1 \\
\varphi_{56} &= 80640_1 \\
\varphi_{86} &= 279720_1 \\
\varphi_{90} &= 302680_1
\end{aligned}$$

Block 6:	φ_{10}	φ_{62}	φ_{64}		
$1365_1 = \chi_9$	1	.	.	$\varphi_{10} =$	1365_1
$116480_1 = \chi_{65}$	1	1	.	$\varphi_{62} =$	115115_1
$125125_1 = \chi_{66}$	.	.	1	$\varphi_{64} =$	125125_1
$125125_2 = \chi_{67}$	.	.	1		
$240240_2 = \chi_{87}$	.	1	1		

Block 8:	φ_{17}	φ_{22}	φ_{53}	φ_{65}	φ_{68}	φ_{100}		
$4004_1 = \chi_{17}$	1	.	.	.	.	.	$\varphi_{17} =$	4004_1
$11648_1 = \chi_{21}$	.	1	.	.	.	.	$\varphi_{22} =$	11648_1
$73710_1 = \chi_{51}$	1	.	1	.	.	.	$\varphi_{53} =$	69706_1
$150150_1 = \chi_{69}$	.	1	.	.	1	.	$\varphi_{65} =$	130494_1
$200200_1 = \chi_{79}$	.	.	1	1	.	.	$\varphi_{68} =$	138502_1
$640640_1 = \chi_{118}$	.	.	.	1	.	1	$\varphi_{100} =$	510146_1
$648648_1 = \chi_{119}$	.	.	.	.	1	1		

Block 9:	φ_{20}	φ_{21}	φ_{32}	φ_{35}	φ_{84}	φ_{85}		
$10752_1 = \chi_{20}$	.	1	.	.	.	.	$\varphi_{20} =$	9268_1
$20020_1 = \chi_{28}$	1	1	.	.	.	.	$\varphi_{21} =$	10752_1
$23100_1 = \chi_{32}$	.	.	1	.	.	.	$\varphi_{32} =$	23100_1
$36036_1 = \chi_{37}$	1	.	.	1	.	.	$\varphi_{35} =$	26768_1
$262080_1 = \chi_{88}$	.	.	1	.	1	.	$\varphi_{84} =$	238980_1
$300300_1 = \chi_{93}$	.	.	.	1	.	1	$\varphi_{85} =$	273532_1
$512512_1 = \chi_{110}$	.	.	.	.	1	1		

Block 10:	φ_{24}	φ_{31}	φ_{46}		
$12012_1 = \chi_{22}$	1	.	.	$\varphi_{24} =$	12012_1
$12012_2 = \chi_{23}$	1	.	.	$\varphi_{31} =$	21840_1
$21840_1 = \chi_{31}$	.	1	.	$\varphi_{46} =$	48048_1
$60060_1 = \chi_{44}$	1	.	1		
$69888_1 = \chi_{48}$	.	1	1		

Block 11:	φ_{26}	φ_{47}	φ_{48}	φ_{54}	φ_{58}	φ_{66}		
$13860_1 = \chi_{24}$	1	.	.	.	.	.	φ_{26}	$= 13860_1$
$65520_1 = \chi_{46}$	1	.	1	.	.	.	φ_{47}	$= 48440_1$
$71680_1 = \chi_{50}$	.	.	.	1	.	.	φ_{48}	$= 51660_1$
$100100_1 = \chi_{58}$	.	1	1	.	.	.	φ_{54}	$= 71680_1$
$180180_1 = \chi_{75}$	.	.	.	1	1	.	φ_{58}	$= 108500_1$
$180180_2 = \chi_{76}$	.	1	.	.	.	1	φ_{66}	$= 131740_1$
$240240_1 = \chi_{86}$	.	.	.	.	1	1		