

$Fi_{22} \pmod{13}$

	blocks	defect	matrix
$G :$	1	1	8×6
	2	0	$78_1 = \chi_2, \varphi_2$
	3	0	$429_1 = \chi_3, \varphi_3$
	4	0	$1001_1 = \chi_4, \varphi_4$
	5	0	$1430_1 = \chi_5, \varphi_5$
	6	0	$3003_1 = \chi_6, \varphi_6$
	7	0	$10725_1 = \chi_8, \varphi_8$
	8	0	$13650_1 = \chi_9, \varphi_9$
	9	0	$30030_1 = \chi_{10}, \varphi_{10}$
	10	0	$32032_1 = \chi_{11}, \varphi_{11}$
	11	0	$43680_1 = \chi_{12}, \varphi_{12}$
	12	0	$45045_1 = \chi_{13}, \varphi_{13}$
	13	0	$48048_1 = \chi_{14}, \varphi_{14}$
	14	0	$50050_1 = \chi_{15}, \varphi_{15}$
	15	0	$50050_2 = \chi_{16}, \varphi_{16}$
	16	0	$75075_1 = \chi_{17}, \varphi_{17}$
	17	0	$75075_2 = \chi_{18}, \varphi_{18}$
	18	0	$75075_3 = \chi_{19}, \varphi_{19}$
	19	0	$81081_1 = \chi_{20}, \varphi_{20}$
	20	0	$114400_1 = \chi_{21}, \varphi_{21}$
	21	0	$150150_1 = \chi_{24}, \varphi_{23}$
	22	0	$205920_1 = \chi_{25}, \varphi_{24}$
	23	0	$289575_1 = \chi_{26}, \varphi_{25}$
	24	0	$300300_1 = \chi_{27}, \varphi_{26}$
	25	0	$320320_1 = \chi_{28}, \varphi_{27}$
	26	0	$370656_1 = \chi_{30}, \varphi_{29}$
	27	0	$400400_1 = \chi_{31}, \varphi_{30}$
	28	0	$400400_2 = \chi_{32}, \varphi_{31}$
	29	0	$400400_3 = \chi_{33}, \varphi_{32}$
	$30 = \overline{29}$	0	$400400_4 = \chi_{34}, \varphi_{33}$
	31	0	$450450_1 = \chi_{35}, \varphi_{35}$
	32	0	$450450_2 = \chi_{36}, \varphi_{36}$
	33	0	$576576_1 = \chi_{37}, \varphi_{37}$
	34	0	$579150_1 = \chi_{39}, \varphi_{38}$
	35	0	$582400_1 = \chi_{40}, \varphi_{39}$
	$36 = \overline{35}$	0	$582400_2 = \chi_{41}, \varphi_{40}$
	37	0	$600600_1 = \chi_{42}, \varphi_{41}$
	38	0	$600600_2 = \chi_{43}, \varphi_{42}$
	$39 = \overline{38}$	0	$600600_3 = \chi_{44}, \varphi_{43}$
	40	0	$675675_1 = \chi_{45}, \varphi_{44}$

	blocks	defect	matrix
	41	0	$720720_1 = \chi_{46}, \varphi_{45}$
	42	0	$800800_1 = \chi_{47}, \varphi_{46}$
	43	0	$852930_1 = \chi_{48}, \varphi_{47}$
	44	0	$938223_1 = \chi_{49}, \varphi_{48}$
	45	0	$972972_1 = \chi_{50}, \varphi_{49}$
	46	0	$982800_1 = \chi_{51}, \varphi_{50}$
	$47 = \overline{46}$	0	$982800_2 = \chi_{52}, \varphi_{51}$
	48	0	$1201200_1 = \chi_{53}, \varphi_{53}$
	49	0	$1372800_1 = \chi_{55}, \varphi_{54}$
	50	0	$1791153_1 = \chi_{57}, \varphi_{55}$
	51	0	$1876446_1 = \chi_{58}, \varphi_{56}$
	52	0	$2027025_1 = \chi_{59}, \varphi_{57}$
	53	0	$2050048_1 = \chi_{60}, \varphi_{58}$
	54	0	$2316600_1 = \chi_{61}, \varphi_{59}$
	55	0	$2402400_1 = \chi_{62}, \varphi_{60}$
	56	0	$2555904_1 = \chi_{63}, \varphi_{61}$
	57	0	$2555904_2 = \chi_{64}, \varphi_{62}$
	58	0	$2729376_1 = \chi_{65}, \varphi_{63}$
$2.G :$	59	1	8×6
	60	0	$2080_1 = \chi_{67}, \varphi_{65}$
	61	0	$2080_2 = \chi_{68}, \varphi_{66}$
	62	0	$5824_1 = \chi_{69}, \varphi_{67}$
	63	0	$5824_2 = \chi_{70}, \varphi_{68}$
	$64 = \overline{63}$	0	$5824_3 = \chi_{71}, \varphi_{69}$
	$65 = \overline{62}$	0	$5824_4 = \chi_{72}, \varphi_{70}$
	66	0	$13728_1 = \chi_{73}, \varphi_{71}$
	67	0	$13728_2 = \chi_{74}, \varphi_{72}$
	68	0	$27456_1 = \chi_{75}, \varphi_{73}$
	69	0	$48048_2 = \chi_{76}, \varphi_{74}$
	70	0	$48048_3 = \chi_{77}, \varphi_{75}$
	71	0	$146432_1 = \chi_{82}, \varphi_{80}$
	72	0	$146432_2 = \chi_{83}, \varphi_{81}$
	73	0	$228800_1 = \chi_{84}, \varphi_{82}$
	74	0	$235872_1 = \chi_{85}, \varphi_{83}$
	75	0	$235872_2 = \chi_{86}, \varphi_{84}$
	76	0	$320320_2 = \chi_{87}, \varphi_{85}$
	77	0	$320320_3 = \chi_{88}, \varphi_{86}$
	78	0	$400400_5 = \chi_{89}, \varphi_{87}$
	79	0	$400400_6 = \chi_{90}, \varphi_{88}$
	80	0	$436800_1 = \chi_{91}, \varphi_{89}$

	blocks	defect	matrix
	81	0	$436800_2 = \chi_{92}, \varphi_{90}$
	82	0	$480480_1 = \chi_{93}, \varphi_{91}$
	83	0	$480480_2 = \chi_{94}, \varphi_{92}$
	84	0	$686400_1 = \chi_{95}, \varphi_{93}$
	85	0	$686400_2 = \chi_{96}, \varphi_{94}$
	86	0	$915200_1 = \chi_{97}, \varphi_{95}$
	87	0	$915200_2 = \chi_{98}, \varphi_{96}$
	88	0	$1029600_1 = \chi_{99}, \varphi_{97}$
	89	0	$1201200_2 = \chi_{100}, \varphi_{98}$
	90	0	$1201200_3 = \chi_{101}, \varphi_{99}$
	91	0	$1297296_1 = \chi_{102}, \varphi_{100}$
	92	0	$1297296_2 = \chi_{103}, \varphi_{101}$
	93	0	$2196480_1 = \chi_{107}, \varphi_{103}$
	94	0	$2196480_2 = \chi_{108}, \varphi_{104}$
	95	0	$2358720_1 = \chi_{109}, \varphi_{105}$
	96	0	$2358720_2 = \chi_{110}, \varphi_{106}$
	97	0	$2402400_2 = \chi_{111}, \varphi_{107}$
	98	0	$2402400_3 = \chi_{112}, \varphi_{108}$
	99	0	$2555904_3 = \chi_{113}, \varphi_{109}$
	100	0	$2555904_4 = \chi_{114}, \varphi_{110}$
3.G :	101	0	$351_1 = \chi_{115}, \varphi_{111}$
	102 = 101*		
	103	0	$7722_1 = \chi_{116}, \varphi_{112}$
	104 = 103*		
	105	1	8×6
	106 = 105*		
	107	0	$19305_1 = \chi_{119}, \varphi_{114}$
	108 = 107*		
	109	0	$19656_1 = \chi_{120}, \varphi_{115}$
	110 = 109*		
	111	0	$27027_1 = \chi_{121}, \varphi_{116}$
	112 = 111*		
	113	0	$42120_1 = \chi_{122}, \varphi_{117}$
	114 = 113*		
	115	0	$54054_1 = \chi_{124}, \varphi_{119}$
	116 = 115*		
	117	0	$61425_1 = \chi_{125}, \varphi_{120}$
	118 = 117*		
	119	0	$96525_1 = \chi_{126}, \varphi_{121}$
	120 = 119*		

	blocks	defect	matrix
	121	0	$123552_1 = \chi_{127}, \varphi_{122}$
	122 = 121*		
	123	0	$235872_3 = \chi_{128}, \varphi_{125}$
	124 = 123*		
	125	0	$289575_2 = \chi_{130}, \varphi_{126}$
	126 = 125*		
	127	0	$368550_1 = \chi_{132}, \varphi_{127}$
	128 = 127*		
	129 = $\overline{128}$	0	$368550_3 = \chi_{133}, \varphi_{128}$
	130 = 129*		
	131	0	$386100_1 = \chi_{134}, \varphi_{129}$
	132 = 131*		
	133	0	$405405_1 = \chi_{135}, \varphi_{130}$
	134 = 133*		
	135	0	$405405_3 = \chi_{136}, \varphi_{131}$
	136 = 135*		
	137	0	$432432_1 = \chi_{137}, \varphi_{132}$
	138 = 137*		
	139	0	$494208_1 = \chi_{138}, \varphi_{134}$
	140 = 139*		
	141	0	$675675_2 = \chi_{141}, \varphi_{136}$
	142 = 141*		
	143	0	$675675_4 = \chi_{142}, \varphi_{137}$
	144 = 143*		
	145	0	$772200_1 = \chi_{143}, \varphi_{138}$
	146 = 145*		
	147	0	$852930_2 = \chi_{144}, \varphi_{139}$
	148 = 147*		
	149	0	$938223_2 = \chi_{145}, \varphi_{140}$
	150 = 149*		
	151	0	$1235520_1 = \chi_{147}, \varphi_{141}$
	152 = 151*		
	153	0	$1297296_3 = \chi_{148}, \varphi_{142}$
	154 = 153*		
	155 = $\overline{154}$	0	$1297296_5 = \chi_{149}, \varphi_{143}$
	156 = 155*		
	157	0	$1351350_1 = \chi_{150}, \varphi_{144}$
	158 = 157*		
	159	0	$1351350_3 = \chi_{151}, \varphi_{145}$
	160 = 159*		

	blocks	defect	matrix
	161	0	$1351350_5 = \chi_{152}, \varphi_{146}$
	162 = 161*		
	163	0	$1351350_7 = \chi_{153}, \varphi_{147}$
	164 = 163*		
	165	0	$1621620_1 = \chi_{154}, \varphi_{148}$
	166 = 165*		
	167	0	$1658475_1 = \chi_{155}, \varphi_{149}$
	168 = 167*		
	169 = $\overline{168}$	0	$1658475_3 = \chi_{156}, \varphi_{150}$
	170 = 169*		
	171	0	$1729728_1 = \chi_{157}, \varphi_{151}$
	172 = 171*		
	173	0	$1791153_2 = \chi_{158}, \varphi_{152}$
	174 = 173*		
	175	0	$1853280_1 = \chi_{159}, \varphi_{153}$
	176 = 175*		
	177	0	$1876446_2 = \chi_{160}, \varphi_{154}$
	178 = 177*		
	179	0	$1965600_1 = \chi_{161}, \varphi_{155}$
	180 = 179*		
	181	0	$1965600_3 = \chi_{162}, \varphi_{156}$
	182 = 181*		
	183	0	$2729376_2 = \chi_{163}, \varphi_{157}$
	184 = 183*		
	185	0	$3088800_1 = \chi_{164}, \varphi_{158}$
	186 = 185*		
6.G :	187	1	8×6
	188 = 187*		
	189	0	$61776_1 = \chi_{167}, \varphi_{161}$
	190 = 189*		
	191	0	$61776_3 = \chi_{168}, \varphi_{162}$
	192 = 191*		
	193	0	$112320_1 = \chi_{171}, \varphi_{165}$
	194 = 193*		
	195	0	$112320_3 = \chi_{172}, \varphi_{166}$
	196 = 195*		
	197	0	$123552_3 = \chi_{173}, \varphi_{167}$
	198 = 197*		
	199	0	$308880_1 = \chi_{174}, \varphi_{168}$
	200 = 199*		

	blocks	defect	matrix
	201	0	$308880_3 = \chi_{175}, \varphi_{169}$
	202 = 201*		
	203	0	$314496_1 = \chi_{176}, \varphi_{170}$
	204 = 203*		
	205	0	$314496_3 = \chi_{177}, \varphi_{171}$
	206 = 205*		
	207 = $\overline{206}$	0	$314496_5 = \chi_{178}, \varphi_{172}$
	208 = 207*		
	209 = $\overline{204}$	0	$314496_7 = \chi_{179}, \varphi_{173}$
	210 = 209*		
	211	0	$359424_1 = \chi_{180}, \varphi_{174}$
	212 = 211*		
	213	0	$359424_3 = \chi_{181}, \varphi_{175}$
	214 = 213*		
	215	0	$432432_3 = \chi_{182}, \varphi_{176}$
	216 = 215*		
	217	0	$432432_5 = \chi_{183}, \varphi_{177}$
	218 = 217*		
	219	0	$1123200_1 = \chi_{186}, \varphi_{180}$
	220 = 219*		
	221	0	$1123200_3 = \chi_{187}, \varphi_{181}$
	222 = 221*		
	223	0	$1235520_3 = \chi_{188}, \varphi_{182}$
	224 = 223*		
	225	0	$1235520_5 = \chi_{189}, \varphi_{183}$
	226 = 225*		
	227	0	$1729728_3 = \chi_{190}, \varphi_{184}$
	228 = 227*		
	229	0	$1729728_5 = \chi_{191}, \varphi_{185}$
	230 = 229*		
	231	0	$2594592_1 = \chi_{194}, \varphi_{186}$
	232 = 231*		
	233	0	$2965248_1 = \chi_{195}, \varphi_{187}$
	234 = 233*		
	235	0	$2965248_3 = \chi_{196}, \varphi_{188}$
	236 = 235*		
	237	0	$3088800_3 = \chi_{197}, \varphi_{189}$
	238 = 237*		
	239	0	$3088800_5 = \chi_{198}, \varphi_{190}$
	240 = 239*		

Block 1:	φ_1	φ_7	φ_{22}	φ_{28}	φ_{34}	φ_{52}
$1_1 = \chi_1$	1	.	.	.	.	.
$3080_1 = \chi_7$	1	1	.	.	.	.
$138600_1 = \chi_{22}$	.	.	1	.	.	.
$138600_2 = \chi_{23}$	.	.	1	.	.	.
$360855_1 = \chi_{29}$	.	1	.	1	.	.
$577368_1 = \chi_{38}$	.	.	1	.	1	.
$1360800_1 = \chi_{54}$	.	.	.	1	.	1
$1441792_1 = \chi_{56}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_1 &= 1_1 \\ \varphi_7 &= 3079_1 \\ \varphi_{22} &= 138600_1 \\ \varphi_{28} &= 357776_1 \\ \varphi_{34} &= 438768_1 \\ \varphi_{52} &= 1003024_1 \end{aligned}$$

Block 59:	φ_{64}	φ_{76}	φ_{77}	φ_{78}	φ_{79}	φ_{102}
$352_1 = \chi_{66}$	1	.	.	.	.	.
$105600_1 = \chi_{78}$	.	1	.	.	.	.
$105600_2 = \chi_{79}$	.	.	1	.	.	.
$123200_1 = \chi_{80}$	1	.	.	1	.	.
$133056_1 = \chi_{81}$	.	.	.	.	1	.
$1441792_2 = \chi_{104}$	.	.	.	1	.	1
$1663200_1 = \chi_{105}$	.	1	1	.	1	1
$1663200_2 = \chi_{106}$	.	1	1	.	1	1

$$\begin{aligned} \varphi_{64} &= 352_1 \\ \varphi_{76} &= 105600_1 \\ \varphi_{77} &= 105600_2 \\ \varphi_{78} &= 122848_1 \\ \varphi_{79} &= 133056_1 \\ \varphi_{102} &= 1318944_1 \end{aligned}$$

Blocks 105, 106:	φ_{113}	φ_{118}	φ_{123}	φ_{124}	φ_{133}	φ_{135}
$12474_1 = \chi_{117}$	1	.	.	.	.	.
$12474_3 = \chi_{118}$	1	.	.	.	.	.
$51975_1 = \chi_{123}$	.	1	.	.	.	.
$237600_1 = \chi_{129}$	1	.	.	1	.	.
$360855_2 = \chi_{131}$	.	.	1	1	.	.
$577368_2 = \chi_{139}$	.	1	.	.	.	1
$608256_1 = \chi_{140}$	.	.	1	.	1	.
$997920_1 = \chi_{146}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_{113} &= 12474_1 \\ \varphi_{118} &= 51975_1 \\ \varphi_{123} &= 135729_1 \\ \varphi_{124} &= 225126_1 \\ \varphi_{133} &= 472527_1 \\ \varphi_{135} &= 525393_1 \end{aligned}$$

Blocks 187, 188:	φ_{159}	φ_{160}	φ_{163}	φ_{164}	φ_{178}	φ_{179}	
$1728_1 = \chi_{165}$	1	.	.	.	.	.	$\varphi_{159} = 1728_1$
$1728_3 = \chi_{166}$	.	1	.	.	.	.	$\varphi_{160} = 1728_3$
$71280_1 = \chi_{169}$	1	.	1	.	.	.	$\varphi_{163} = 69552_1$
$71280_3 = \chi_{170}$	.	1	.	1	.	.	$\varphi_{164} = 69552_3$
$967680_1 = \chi_{184}$	.	.	1	.	1	.	$\varphi_{178} = 898128_1$
$967680_3 = \chi_{185}$	.	.	.	1	.	1	$\varphi_{179} = 898128_3$
$1796256_1 = \chi_{192}$	.	.	.	.	1	1	
$1796256_3 = \chi_{193}$	.	.	.	.	1	1	