

$Co_1 \pmod{23}$

	blocks	defect	matrix
$G :$	1	1	13×11
	2	0	$276_1 = \chi_2, \varphi_2$
	3	0	$299_1 = \chi_3, \varphi_3$
	4	0	$1771_1 = \chi_4, \varphi_4$
	5	0	$8855_1 = \chi_5, \varphi_5$
	6	0	$17250_1 = \chi_6, \varphi_6$
	7	0	$37674_1 = \chi_8, \varphi_8$
	8	0	$44275_1 = \chi_9, \varphi_9$
	9	0	$80730_1 = \chi_{10}, \varphi_{10}$
	10	0	$94875_1 = \chi_{11}, \varphi_{11}$
	11	0	$313950_1 = \chi_{12}, \varphi_{12}$
	12	0	$345345_1 = \chi_{13}, \varphi_{13}$
	13	0	$376740_1 = \chi_{14}, \varphi_{14}$
	14	0	$483000_1 = \chi_{15}, \varphi_{15}$
	15	0	$644644_1 = \chi_{16}, \varphi_{16}$
	16	0	$822250_1 = \chi_{19}, \varphi_{18}$
	17	0	$871884_1 = \chi_{20}, \varphi_{19}$
	18	0	$1434510_1 = \chi_{21}, \varphi_{20}$
	19	0	$1450449_1 = \chi_{22}, \varphi_{21}$
	20	0	$1771000_1 = \chi_{23}, \varphi_{22}$
	21	0	$1821600_1 = \chi_{24}, \varphi_{23}$
	22	0	$2055625_1 = \chi_{25}, \varphi_{24}$
	23	0	$2417415_1 = \chi_{26}, \varphi_{25}$
	24	0	$2464749_1 = \chi_{27}, \varphi_{26}$
	$25 = \overline{24}$	0	$2464749_2 = \chi_{28}, \varphi_{27}$
	26	0	$2816856_1 = \chi_{29}, \varphi_{28}$
	27	0	$2877875_1 = \chi_{30}, \varphi_{29}$
	28	0	$5494125_1 = \chi_{32}, \varphi_{31}$
	29	0	$5801796_1 = \chi_{33}, \varphi_{32}$
	30	0	$7628985_1 = \chi_{34}, \varphi_{33}$
	31	0	$9221850_1 = \chi_{35}, \varphi_{34}$
	32	0	$9669660_1 = \chi_{36}, \varphi_{35}$
	33	0	$12432420_1 = \chi_{37}, \varphi_{36}$
	34	0	$16347825_1 = \chi_{38}, \varphi_{37}$
	35	0	$20083140_1 = \chi_{39}, \varphi_{39}$
	36	0	$21528000_1 = \chi_{41}, \varphi_{40}$
	37	0	$21579129_1 = \chi_{42}, \varphi_{41}$
	38	0	$23244375_1 = \chi_{43}, \varphi_{42}$
	39	0	$24174150_1 = \chi_{44}, \varphi_{43}$
	40	0	$24667500_1 = \chi_{45}, \varphi_{44}$

	blocks	defect	matrix
	41	0	$24794000_1 = \chi_{46}, \varphi_{45}$
	42	0	$25900875_1 = \chi_{47}, \varphi_{46}$
	43	0	$31574400_1 = \chi_{48}, \varphi_{47}$
	44	0	$40166280_1 = \chi_{49}, \varphi_{49}$
	45	0	$44013375_1 = \chi_{51}, \varphi_{50}$
	46	0	$46621575_1 = \chi_{52}, \varphi_{51}$
	47	0	$51571520_1 = \chi_{53}, \varphi_{52}$
	48	0	$55255200_1 = \chi_{54}, \varphi_{53}$
	49	0	$57544344_1 = \chi_{55}, \varphi_{54}$
	50	0	$60435375_1 = \chi_{56}, \varphi_{55}$
	51	0	$65270205_1 = \chi_{57}, \varphi_{56}$
	52	0	$66602250_1 = \chi_{58}, \varphi_{58}$
	53	0	$77702625_1 = \chi_{59}, \varphi_{59}$
	54	0	$83720000_1 = \chi_{60}, \varphi_{60}$
	55	0	$85250880_1 = \chi_{61}, \varphi_{61}$
	56	0	$91547820_1 = \chi_{62}, \varphi_{62}$
	57	0	$100725625_1 = \chi_{63}, \varphi_{63}$
	58	0	$109882500_1 = \chi_{65}, \varphi_{65}$
	59	0	$150732800_1 = \chi_{66}, \varphi_{66}$
	60	0	$163478250_1 = \chi_{67}, \varphi_{68}$
	61	0	$184184000_1 = \chi_{68}, \varphi_{70}$
	62	0	$185912496_1 = \chi_{69}, \varphi_{71}$
	63	0	$185955000_1 = \chi_{70}, \varphi_{72}$
	64	0	$201451250_1 = \chi_{72}, \varphi_{73}$
	65	0	$205395750_1 = \chi_{73}, \varphi_{74}$
	66	0	$207491625_1 = \chi_{74}, \varphi_{75}$
	67	0	$210974400_1 = \chi_{75}, \varphi_{76}$
	68	0	$215547904_1 = \chi_{76}, \varphi_{77}$
	69	0	$241741500_1 = \chi_{78}, \varphi_{78}$
	70	0	$247235625_1 = \chi_{79}, \varphi_{79}$
	71	0	$251756505_1 = \chi_{80}, \varphi_{80}$
	72	0	$257857600_1 = \chi_{81}, \varphi_{81}$
	73	0	$259008750_1 = \chi_{82}, \varphi_{82}$
	74	0	$267014475_1 = \chi_{83}, \varphi_{83}$
	75	0	$292953024_1 = \chi_{85}, \varphi_{84}$
	76	0	$299710125_1 = \chi_{86}, \varphi_{85}$
	77	0	$302176875_1 = \chi_{87}, \varphi_{86}$
	78	0	$309429120_1 = \chi_{88}, \varphi_{87}$
	79	0	$326956500_1 = \chi_{89}, \varphi_{88}$
	80	0	$360062976_1 = \chi_{90}, \varphi_{89}$

	blocks	defect	matrix
	81	0	$387317700_1 = \chi_{91}, \varphi_{90}$
	82	0	$402902500_1 = \chi_{92}, \varphi_{92}$
	83	0	$464257024_1 = \chi_{93}, \varphi_{93}$
	84	0	$469945476_1 = \chi_{94}, \varphi_{94}$
	85	0	$469945476_2 = \chi_{95}, \varphi_{95}$
	86	0	$483483000_1 = \chi_{96}, \varphi_{96}$
	87	0	$502078500_1 = \chi_{97}, \varphi_{97}$
	88	0	$503513010_1 = \chi_{98}, \varphi_{98}$
	89	0	$522161640_1 = \chi_{100}, \varphi_{99}$
2.G :	90	1	13×11
	91	0	$2024_1 = \chi_{103}, \varphi_{101}$
	92	0	$2576_1 = \chi_{104}, \varphi_{102}$
	93	0	$40480_1 = \chi_{106}, \varphi_{104}$
	94	0	$95680_1 = \chi_{107}, \varphi_{105}$
	95	0	$170016_1 = \chi_{108}, \varphi_{106}$
	96	0	$299000_1 = \chi_{109}, \varphi_{107}$
	97	0	$315744_1 = \chi_{110}, \varphi_{108}$
	98	0	$351624_1 = \chi_{111}, \varphi_{109}$
	99	0	$789360_1 = \chi_{113}, \varphi_{111}$
	100	0	$1841840_1 = \chi_{114}, \varphi_{112}$
	101	0	$1937520_1 = \chi_{115}, \varphi_{113}$
	102	0	$5051904_1 = \chi_{117}, \varphi_{115}$
	103	0	$6446440_1 = \chi_{118}, \varphi_{116}$
	104	0	$6446440_2 = \chi_{119}, \varphi_{117}$
	105	0	$7104240_1 = \chi_{120}, \varphi_{118}$
	106	0	$11051040_1 = \chi_{123}, \varphi_{121}$
	107	0	$13156000_1 = \chi_{124}, \varphi_{122}$
	108	0	$15002624_1 = \chi_{125}, \varphi_{123}$
	$109 = \overline{108}$	0	$15002624_2 = \chi_{126}, \varphi_{124}$
	110	0	$15471456_1 = \chi_{127}, \varphi_{125}$
	111	0	$17050176_1 = \chi_{130}, \varphi_{127}$
	112	0	$17310720_1 = \chi_{131}, \varphi_{128}$
	113	0	$18987696_1 = \chi_{132}, \varphi_{129}$
	114	0	$19734000_1 = \chi_{133}, \varphi_{130}$
	115	0	$34155000_1 = \chi_{134}, \varphi_{131}$
	116	0	$44204160_1 = \chi_{137}, \varphi_{134}$
	117	0	$49335000_1 = \chi_{138}, \varphi_{135}$
	118	0	$50519040_1 = \chi_{139}, \varphi_{136}$
	119	0	$51571520_2 = \chi_{140}, \varphi_{137}$
	120	0	$59153976_1 = \chi_{141}, \varphi_{138}$

$$\begin{array}{llll}
\varphi_1 & = & 1_1 & \\
\varphi_7 & = & 27299_1 & \varphi_{57} = 66445974_1 \\
\varphi_{17} & = & 673750_1 & \varphi_{64} = 106154102_1 \\
\varphi_{30} & = & 4072797_1 & \varphi_{67} = 153202026_1 \\
\varphi_{38} & = & 16977078_1 & \varphi_{69} = 174125898_1 \\
\varphi_{48} & = & 39696426_1 & \varphi_{91} = 398473098_1
\end{array}$$

Block 90:	φ_{100}	φ_{103}	φ_{110}	φ_{114}	φ_{119}	φ_{120}	φ_{126}	φ_{132}	φ_{133}	φ_{153}
$24_1 = \chi_{102}$	1	.	.	.	.	.	.	.	.	.
$4576_1 = \chi_{105}$	1	1	.	.	.	.	.	.	.	.
$388080_1 = \chi_{112}$	.	1	1	.	.	.	.	.	.	.
$4004000_1 = \chi_{116}$	.	.	1	1	.	.	.	.	.	.
$9152000_1 = \chi_{121}$	.	.	.	.	1	.	.	.	.	.
$9152000_2 = \chi_{122}$	.	.	.	.	.	1	.	.	.	.
$16170000_1 = \chi_{128}$	.	.	.	.	.	.	1	.	.	.
$16170000_2 = \chi_{129}$	.	.	.	.	.	.	1	.	.	.
$40370176_2 = \chi_{135}$	.	.	.	.	.	.	.	1	.	.
$40370176_3 = \chi_{136}$	.	.	.	.	.	.	.	.	1	.
$287006720_1 = \chi_{156}$	.	.	.	1	.	.	.	.	.	1
$655360000_1 = \chi_{165}$	.	.	.	.	.	.	1	.	.	.
$1021620600_1 = \chi_{167}$	.	.	.	.	1	1	.	1	1	1

(Block 90:)	φ_{162}	
$24_1 = \chi_{102}$	.	$\varphi_{100} = 24_1$
$4576_1 = \chi_{105}$	.	$\varphi_{103} = 4552_1$
$388080_1 = \chi_{112}$	.	$\varphi_{110} = 383528_1$
$4004000_1 = \chi_{116}$	.	$\varphi_{114} = 3620472_1$
$9152000_1 = \chi_{121}$	.	$\varphi_{119} = 9152000_1$
$9152000_2 = \chi_{122}$	.	$\varphi_{120} = 9152000_2$
$16170000_1 = \chi_{128}$	.	$\varphi_{126} = 16170000_1$
$16170000_2 = \chi_{129}$	.	$\varphi_{132} = 40370176_1$
$40370176_2 = \chi_{135}$	.	$\varphi_{133} = 40370176_2$
$40370176_3 = \chi_{136}$	.	$\varphi_{153} = 283386248_1$
$287006720_1 = \chi_{156}$	.	$\varphi_{162} = 639190000_1$
$655360000_1 = \chi_{165}$	1	
$1021620600_1 = \chi_{167}$	1	