

$O_7(3).2 \pmod{13}$

	blocks	defect	matrix
$G :$	1	1	8×6
	2	1	8×6
	3	0	$78_1 = \chi_{2,0}, \varphi_{2,0}$
	4	0	$78_2 = \chi_{2,1}, \varphi_{2,1}$
	5	0	$91_1 = \chi_{3,0}, \varphi_{3,0}$
	6	0	$91_2 = \chi_{3,1}, \varphi_{3,1}$
	7	0	$182_1 = \chi_{6,0}, \varphi_{6,0}$
	8	0	$182_2 = \chi_{6,1}, \varphi_{6,1}$
	9	0	$195_1 = \chi_{7,0}, \varphi_{7,0}$
	10	0	$195_2 = \chi_{7,1}, \varphi_{7,1}$
	11	0	$520_1 = \chi_{8+}, \varphi_{8+}$
	12	0	$273_1 = \chi_{10,0}, \varphi_{10,0}$
	13	0	$273_2 = \chi_{10,1}, \varphi_{10,1}$
	14	0	$546_1 = \chi_{11,0}, \varphi_{11,0}$
	15	0	$546_2 = \chi_{11,1}, \varphi_{11,1}$
	16	0	$819_1 = \chi_{12,0}, \varphi_{12,0}$
	17	0	$819_2 = \chi_{12,1}, \varphi_{12,1}$
	18	0	$1820_1 = \chi_{13+}, \varphi_{13+}$
	19	0	$1092_1 = \chi_{15,0}, \varphi_{15,0}$
	20	0	$1092_2 = \chi_{15,1}, \varphi_{15,1}$
	21	0	$1365_1 = \chi_{16,0}, \varphi_{16,0}$
	22	0	$1365_2 = \chi_{16,1}, \varphi_{16,1}$
	23	0	$1365_3 = \chi_{17,0}, \varphi_{17,0}$
	24	0	$1365_4 = \chi_{17,1}, \varphi_{17,1}$
	25	0	$3120_1 = \chi_{18+}, \varphi_{18+}$
	26	0	$1638_1 = \chi_{20,0}, \varphi_{20,0}$
	27	0	$1638_2 = \chi_{20,1}, \varphi_{20,1}$
	28	0	$1820_2 = \chi_{21,0}, \varphi_{21,0}$
	29	0	$1820_3 = \chi_{21,1}, \varphi_{21,1}$
	30	0	$2106_1 = \chi_{22,0}, \varphi_{22,0}$
	31	0	$2106_2 = \chi_{22,1}, \varphi_{22,1}$
	32	0	$2184_1 = \chi_{23,0}, \varphi_{23,0}$
	33	0	$2184_2 = \chi_{23,1}, \varphi_{23,1}$
	34	0	$2457_1 = \chi_{24,0}, \varphi_{24,0}$
	35	0	$2457_2 = \chi_{24,1}, \varphi_{24,1}$
	36	0	$2730_1 = \chi_{25,0}, \varphi_{26,0}$
	37	0	$2730_2 = \chi_{25,1}, \varphi_{26,1}$
	38	0	$2730_3 = \chi_{26,0}, \varphi_{27,0}$
	39	0	$2730_4 = \chi_{26,1}, \varphi_{27,1}$
	40	0	$4095_1 = \chi_{28,0}, \varphi_{28,0}$

	blocks	defect	matrix
	41	0	$4095_2 = \chi_{28,1}, \varphi_{28,1}$
	42	0	$4095_3 = \chi_{29,0}, \varphi_{29,0}$
	43	0	$4095_4 = \chi_{29,1}, \varphi_{29,1}$
	44	0	$4368_1 = \chi_{30,0}, \varphi_{30,0}$
	45	0	$4368_2 = \chi_{30,1}, \varphi_{30,1}$
	46	0	$5265_1 = \chi_{32,0}, \varphi_{32,0}$
	47	0	$5265_2 = \chi_{32,1}, \varphi_{32,1}$
	48	0	$5460_1 = \chi_{33,0}, \varphi_{33,0}$
	49	0	$5460_2 = \chi_{33,1}, \varphi_{33,1}$
	50	0	$5460_3 = \chi_{34,0}, \varphi_{34,0}$
	51	0	$5460_4 = \chi_{34,1}, \varphi_{34,1}$
	52	0	$5460_5 = \chi_{35,0}, \varphi_{35,0}$
	53	0	$5460_6 = \chi_{35,1}, \varphi_{35,1}$
	54	0	$5824_1 = \chi_{36,0}, \varphi_{36,0}$
	55	0	$5824_2 = \chi_{36,1}, \varphi_{36,1}$
	56	0	$5824_3 = \chi_{37,0}, \varphi_{37,0}$
	57	0	$5824_4 = \chi_{37,1}, \varphi_{37,1}$
	58	0	$6552_1 = \chi_{38,0}, \varphi_{38,0}$
	59	0	$6552_2 = \chi_{38,1}, \varphi_{38,1}$
	60	0	$14040_1 = \chi_{39+}, \varphi_{39+}$
	61	0	$7280_1 = \chi_{41,0}, \varphi_{41,0}$
	62	0	$7280_2 = \chi_{41,1}, \varphi_{41,1}$
	63	0	$14560_1 = \chi_{42+}, \varphi_{42+}$
	64	0	$7371_1 = \chi_{44,0}, \varphi_{44,0}$
	65	0	$7371_2 = \chi_{44,1}, \varphi_{44,1}$
	66	0	$16380_1 = \chi_{45+}, \varphi_{45+}$
	67	0	$11648_1 = \chi_{47,0}, \varphi_{47,0}$
	68	0	$11648_2 = \chi_{47,1}, \varphi_{47,1}$
	69	0	$14742_1 = \chi_{48,0}, \varphi_{48,0}$
	70	0	$14742_2 = \chi_{48,1}, \varphi_{48,1}$
	71	0	$16380_2 = \chi_{49,0}, \varphi_{50,0}$
	72	0	$16380_3 = \chi_{49,1}, \varphi_{50,1}$
	73	0	$16640_1 = \chi_{50,0}, \varphi_{51,0}$
	74	0	$16640_2 = \chi_{50,1}, \varphi_{51,1}$
	75	0	$16640_3 = \chi_{51,0}, \varphi_{52,0}$
	76	0	$16640_4 = \chi_{51,1}, \varphi_{52,1}$
	77	0	$17472_1 = \chi_{52,0}, \varphi_{53,0}$
	78	0	$17472_2 = \chi_{52,1}, \varphi_{53,1}$
	79	0	$17472_3 = \chi_{53,0}, \varphi_{54,0}$
	80	0	$17472_4 = \chi_{53,1}, \varphi_{54,1}$

	blocks	defect	matrix
	81	0	$21840_1 = \chi_{57,0}, \varphi_{55,0}$
	82	0	$21840_2 = \chi_{57,1}, \varphi_{55,1}$
	83	0	$22113_1 = \chi_{58,0}, \varphi_{56,0}$
	84	0	$22113_2 = \chi_{58,1}, \varphi_{56,1}$
2.G :	85	0	$520_2 = \chi_{59,0}, \varphi_{57,0}$
	86	0	$520_3 = \chi_{59,1}, \varphi_{57,1}$
	87	1	7×3
	88	0	$1456_1 = \chi_{62,0}, \varphi_{60,0}$
	89	0	$1456_2 = \chi_{62,1}, \varphi_{60,1}$
	90	0	$2912_1 = \chi_{63+}, \varphi_{61+}$
	91	0	$3120_2 = \chi_{65,0}, \varphi_{63,0}$
	92	0	$3120_3 = \chi_{65,1}, \varphi_{63,1}$
	93	0	$3640_1 = \chi_{66,0}, \varphi_{64,0}$
	94	0	$3640_2 = \chi_{66,1}, \varphi_{64,1}$
	95	0	$7280_3 = \chi_{69,0}, \varphi_{67,0}$
	96	0	$7280_4 = \chi_{69,1}, \varphi_{67,1}$
	97	0	$7280_5 = \chi_{70,0}, \varphi_{68,0}$
	98	0	$7280_6 = \chi_{70,1}, \varphi_{68,1}$
	99	0	$14560_2 = \chi_{71+}, \varphi_{69+}$
	100	0	$10920_1 = \chi_{73,0}, \varphi_{73,0}$
	101	0	$10920_2 = \chi_{73,1}, \varphi_{73,1}$
	102	0	$11648_3 = \chi_{74,0}, \varphi_{74,0}$
	103	0	$11648_4 = \chi_{74,1}, \varphi_{74,1}$
	104	0	$11648_5 = \chi_{75,0}, \varphi_{75,0}$
	105	0	$11648_6 = \chi_{75,1}, \varphi_{75,1}$
	106	0	$13104_1 = \chi_{76,0}, \varphi_{76,0}$
	107	0	$13104_2 = \chi_{76,1}, \varphi_{76,1}$
	108	0	$26208_1 = \chi_{77+}, \varphi_{77+}$
	109	0	$14040_2 = \chi_{79,0}, \varphi_{79,0}$
	110	0	$14040_3 = \chi_{79,1}, \varphi_{79,1}$
	111	0	$16640_5 = \chi_{82,0}, \varphi_{80,0}$
	112	0	$16640_6 = \chi_{82,1}, \varphi_{80,1}$
	113	0	$16640_7 = \chi_{83,0}, \varphi_{81,0}$
	114	0	$16640_8 = \chi_{83,1}, \varphi_{81,1}$
	115	0	$21840_3 = \chi_{86,0}, \varphi_{82,0}$
	116	0	$21840_4 = \chi_{86,1}, \varphi_{82,1}$

	blocks	defect	matrix
	117	0	$21840_5 = \chi_{87,0}, \varphi_{83,0}$
	118	0	$21840_6 = \chi_{87,1}, \varphi_{83,1}$
	119	0	$23296_1 = \chi_{88,0}, \varphi_{84,0}$
	120	0	$23296_2 = \chi_{88,1}, \varphi_{84,1}$
3.G :	121	1	8×6
	122	0	$702_1 = \chi_{90+}, \varphi_{86+}$
	123	0	$702_2 = \chi_{91+}, \varphi_{87+}$
	124	0	$4914_1 = \chi_{95+}, \varphi_{91+}$
	125	0	$4914_2 = \chi_{96+}, \varphi_{92+}$
	126	0	$4914_3 = \chi_{97+}, \varphi_{93+}$
	127	0	$5616_1 = \chi_{98+}, \varphi_{94+}$
	128	0	$5616_2 = \chi_{99+}, \varphi_{95+}$
	129	0	$9828_1 = \chi_{100+}, \varphi_{96+}$
	130	0	$9828_2 = \chi_{101+}, \varphi_{97+}$
	131	0	$10530_1 = \chi_{102+}, \varphi_{98+}$
	132	0	$14040_4 = \chi_{103+}, \varphi_{100+}$
	133	0	$14742_3 = \chi_{104+}, \varphi_{101+}$
	134	0	$14742_4 = \chi_{105+}, \varphi_{102+}$
	135	0	$18954_1 = \chi_{108+}, \varphi_{103+}$
	136	0	$19656_1 = \chi_{109+}, \varphi_{104+}$
	137	0	$24570_1 = \chi_{110+}, \varphi_{105+}$
	138	0	$24570_2 = \chi_{111+}, \varphi_{106+}$
	139	0	$24570_3 = \chi_{112+}, \varphi_{107+}$
	140	0	$24570_4 = \chi_{113+}, \varphi_{108+}$
	141	0	$24570_5 = \chi_{114+}, \varphi_{109+}$
	142	0	$29484_1 = \chi_{115+}, \varphi_{110+}$
	143	0	$33696_1 = \chi_{116+}, \varphi_{111+}$
	144	0	$39312_1 = \chi_{117+}, \varphi_{113+}$
	145	0	$39312_2 = \chi_{118+}, \varphi_{114+}$
	146	0	$44928_1 = \chi_{120+}, \varphi_{115+}$
	147	0	$44928_2 = \chi_{121+}, \varphi_{116+}$
6.G :	148	1	8×6
	149	0	$28080_1 = \chi_{126+}, \varphi_{121+}$
	150	0	$39312_3 = \chi_{128+}, \varphi_{123+}$
	151	0	$44928_3 = \chi_{130+}, \varphi_{124+}$
	152	0	$44928_4 = \chi_{131+}, \varphi_{125+}$

Block 1:	$\varphi_{1,0}$	$\varphi_{4,1}$	$\varphi_{5,0}$	$\varphi_{25,0}$	$\varphi_{31,1}$	$\varphi_{49,0}$	
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	$\varphi_{1,0} = 1_1$
$105_2 = \chi_{4,1}$	.	1	.	.	.	.	$\varphi_{4,1} = 105_2$
$168_1 = \chi_{5,0}$	1	.	1	.	.	.	$\varphi_{5,0} = 167_1$
$2835_1 = \chi_{27,0}$	.	.	1	1	.	.	$\varphi_{25,0} = 2668_1$
$4536_2 = \chi_{31,1}$	.	1	.	.	1	.	$\varphi_{31,1} = 4431_2$
$17920_1 = \chi_{54,0}$	.	.	.	1	.	1	$\varphi_{49,0} = 15252_1$
$17920_3 = \chi_{55,0}$	.	.	.	1	.	1	
$19683_1 = \chi_{56,0}$	.	.	.	.	1	1	

Block 2:	$\varphi_{1,1}$	$\varphi_{4,0}$	$\varphi_{5,1}$	$\varphi_{25,1}$	$\varphi_{31,0}$	$\varphi_{49,1}$	
$1_2 = \chi_{1,1}$	1	.	.	.	.	.	$\varphi_{1,1} = 1_2$
$105_1 = \chi_{4,0}$	.	1	.	.	.	.	$\varphi_{4,0} = 105_1$
$168_2 = \chi_{5,1}$	1	.	1	.	.	.	$\varphi_{5,1} = 167_2$
$2835_2 = \chi_{27,1}$	.	.	1	1	.	.	$\varphi_{25,1} = 2668_2$
$4536_1 = \chi_{31,0}$	.	1	.	.	1	.	$\varphi_{31,0} = 4431_1$
$17920_2 = \chi_{54,1}$	.	.	.	1	.	1	$\varphi_{49,1} = 15252_2$
$17920_4 = \chi_{55,1}$	.	.	.	1	.	1	
$19683_2 = \chi_{56,1}$	.	.	.	.	1	1	

Block 87:	φ_{58+}	φ_{65+}	φ_{71+}	
$1120_1 = \chi_{60+}$	1	.	.	
$13440_1 = \chi_{67+}$	1	1	.	$\varphi_{58+} = 1120_1$
$30240_1 = \chi_{80+}$	.	1	1	$\varphi_{65+} = 12320_1$
$17920_5 = \chi_{84,0}$	.	.	1	$\varphi_{71+} = 17920_1$
$17920_6 = \chi_{84,1}$	.	.	1	
$17920_7 = \chi_{85,0}$	.	.	1	
$17920_8 = \chi_{85,1}$	.	.	1	

Block 121:	φ_{85+}	φ_{88+}	φ_{89+}	φ_{90+}	φ_{99+}	φ_{112+}
$54_1 = \chi_{89+}$	1	.	.	.	.	.
$756_1 = \chi_{92+}$	.	1	.	.	.	.
$3456_1 = \chi_{93+}$	1	.	.	1	.	.
$3456_2 = \chi_{94+}$	.	1	1	.	.	.
$15120_1 = \chi_{106+}$	.	.	.	1	1	.
$15120_2 = \chi_{107+}$	.	.	.	1	1	.
$39366_1 = \chi_{119+}$	.	.	1	.	.	1
$48384_1 = \chi_{122+}$	.	.	.	.	1	1

$$\begin{aligned} \varphi_{85+} &= 54_1 \\ \varphi_{88+} &= 756_1 \\ \varphi_{89+} &= 2700_1 \\ \varphi_{90+} &= 3402_1 \\ \varphi_{99+} &= 11718_1 \\ \varphi_{112+} &= 36666_1 \end{aligned}$$

Block 148:	φ_{117+}	φ_{118+}	φ_{119+}	φ_{120+}	φ_{122+}	φ_{126+}
$9072_1 = \chi_{123+}$	1	.	.	.	.	.
$24192_1 = \chi_{124+}$	.	1	1	.	.	.
$24192_2 = \chi_{125+}$	.	1	1	.	.	.
$30240_2 = \chi_{127+}$	.	.	1	1	.	.
$41472_1 = \chi_{129+}$	1	.	.	.	1	.
$48384_2 = \chi_{132+}$	.	.	.	1	1	.
$48384_3 = \chi_{133+}$	.	.	.	.	.	1
$58320_1 = \chi_{134+}$	.	1	.	.	.	1

$$\begin{aligned} \varphi_{117+} &= 9072_1 \\ \varphi_{118+} &= 9936_1 \\ \varphi_{119+} &= 14256_1 \\ \varphi_{120+} &= 15984_1 \\ \varphi_{122+} &= 32400_1 \\ \varphi_{126+} &= 48384_1 \end{aligned}$$