

$U_4(3).2_1 \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	5×3
	2	1	5×3
	3	0	$21_1 = \chi_{2,0}, \varphi_{2,0}$
	4	0	$21_2 = \chi_{2,1}, \varphi_{2,1}$
	5	0	$35_1 = \chi_{3,0}, \varphi_{3,0}$
	6	0	$35_2 = \chi_{3,1}, \varphi_{3,1}$
	7	0	$35_3 = \chi_{4,0}, \varphi_{4,0}$
	8	0	$35_4 = \chi_{4,1}, \varphi_{4,1}$
	9	0	$140_1 = \chi_{6,0}, \varphi_{6,0}$
	10	0	$140_2 = \chi_{6,1}, \varphi_{6,1}$
	11	0	$189_1 = \chi_{7,0}, \varphi_{7,0}$
	12	0	$189_2 = \chi_{7,1}, \varphi_{7,1}$
	13	0	$210_1 = \chi_{8,0}, \varphi_{8,0}$
	14	0	$210_2 = \chi_{8,1}, \varphi_{8,1}$
	15	0	$560_1 = \chi_{9+}, \varphi_{9+}$
	16	0	$560_2 = \chi_{11+}, \varphi_{11+}$
	17	0	$315_1 = \chi_{13,0}, \varphi_{13,0}$
	18	0	$315_2 = \chi_{13,1}, \varphi_{13,1}$
	19	0	$315_3 = \chi_{14,0}, \varphi_{14,0}$
	20	0	$315_4 = \chi_{14,1}, \varphi_{14,1}$
	21	0	$420_1 = \chi_{15,0}, \varphi_{15,0}$
	22	0	$420_2 = \chi_{15,1}, \varphi_{15,1}$
	23	0	$560_3 = \chi_{16,0}, \varphi_{16,0}$
	$24 = \overline{23}$	0	$560_4 = \chi_{16,1}, \varphi_{16,1}$
	25	0	$896_1 = \chi_{20,0}, \varphi_{18,0}$
	26	0	$896_2 = \chi_{20,1}, \varphi_{18,1}$
$2.G :$	27	1	5×3
	28	1	5×3
	29	0	$56_1 = \chi_{22,0}, \varphi_{20,0}$
	$30 = \overline{29}$	0	$56_2 = \chi_{22,1}, \varphi_{20,1}$
	31	0	$56_3 = \chi_{23,0}, \varphi_{21,0}$
	$32 = \overline{31}$	0	$56_4 = \chi_{23,1}, \varphi_{21,1}$
	33	0	$70_1 = \chi_{24,0}, \varphi_{22,0}$
	$34 = \overline{33}$	0	$70_2 = \chi_{24,1}, \varphi_{22,1}$
	35	0	$140_3 = \chi_{25+}, \varphi_{23+}$
	36	0	$140_4 = \chi_{27+}, \varphi_{25+}$
	37	0	$210_3 = \chi_{30,0}, \varphi_{28,0}$
	38	0	$210_4 = \chi_{30,1}, \varphi_{28,1}$
	$39 = \overline{37}$	0	$210_5 = \chi_{31,0}, \varphi_{29,0}$
	$40 = \overline{38}$	0	$210_6 = \chi_{31,1}, \varphi_{29,1}$

	blocks	defect	matrix
	41	0	$504_1 = \chi_{32,0}, \varphi_{30,0}$
	$42 = \overline{41}$	0	$504_2 = \chi_{32,1}, \varphi_{30,1}$
	43	0	$504_3 = \chi_{33,0}, \varphi_{31,0}$
	$44 = \overline{43}$	0	$504_4 = \chi_{33,1}, \varphi_{31,1}$
	45	0	$560_5 = \chi_{35,0}, \varphi_{33,0}$
	$46 = \overline{45}$	0	$560_6 = \chi_{35,1}, \varphi_{33,1}$
	47	0	$630_1 = \chi_{36,0}, \varphi_{34,0}$
	$48 = \overline{47}$	0	$630_2 = \chi_{36,1}, \varphi_{34,1}$
	49	0	$896_3 = \chi_{39,0}, \varphi_{35,0}$
	$50 = \overline{49}$	0	$896_4 = \chi_{39,1}, \varphi_{35,1}$
$4.G :$	51	1	5×3
	52	1	5×3
	$53 = 51^*$		
	$54 = 52^*$		
	55	0	$140_5 = \chi_{42,0}, \varphi_{38,0}$
	56	0	$140_6 = \chi_{42,1}, \varphi_{38,1}$
	$57 = 55^*$		
	$58 = 56^*$		
	59	0	$448_1 = \chi_{43+}, \varphi_{39+}$
	$60 = 59^*$		
	61	0	$448_3 = \chi_{45+}, \varphi_{41+}$
	$62 = 61^*$		
	63	0	$280_1 = \chi_{47,0}, \varphi_{43,0}$
	64	0	$280_2 = \chi_{47,1}, \varphi_{43,1}$
	$65 = 63^*$		
	$66 = 64^*$		
	67	0	$280_5 = \chi_{48,0}, \varphi_{44,0}$
	68	0	$280_6 = \chi_{48,1}, \varphi_{44,1}$
	$69 = 67^*$		
	$70 = 68^*$		
	71	0	$280_9 = \chi_{49,0}, \varphi_{45,0}$
	72	0	$280_{10} = \chi_{49,1}, \varphi_{45,1}$
	$73 = 71^*$		
	$74 = 72^*$		
	75	0	$420_3 = \chi_{50,0}, \varphi_{46,0}$
	76	0	$420_4 = \chi_{50,1}, \varphi_{46,1}$
	$77 = 75^*$		
	$78 = 76^*$		
	79	0	$840_1 = \chi_{54,0}, \varphi_{48,0}$
	80	0	$840_2 = \chi_{54,1}, \varphi_{48,1}$

	blocks	defect	matrix
	$81 = 79^*$ $82 = 80^*$ 83 84 $85 = 83^*$ $86 = 84^*$	 0 0 	 $896_5 = \chi_{55,0}, \varphi_{49,0}$ $896_6 = \chi_{55,1}, \varphi_{49,1}$
$3_1.G :$	87 88 89 90 91 92 93 94 95 96 97 98	 1 0 0 0 0 0 0 0 0 0 0 0	5×3 $42_1 = \chi_{57+}, \varphi_{51+}$ $210_7 = \chi_{58+}, \varphi_{52+}$ $210_8 = \chi_{59+}, \varphi_{53+}$ $210_9 = \chi_{60+}, \varphi_{54+}$ $420_7 = \chi_{61+}, \varphi_{55+}$ $630_3 = \chi_{62+}, \varphi_{56+}$ $672_1 = \chi_{63+}, \varphi_{57+}$ $840_5 = \chi_{67+}, \varphi_{60+}$ $1260_1 = \chi_{68+}, \varphi_{61+}$ $1512_1 = \chi_{70+}, \varphi_{62+}$ $1890_1 = \chi_{71+}, \varphi_{63+}$
$6_1.G :$	99 100 101 102 103 104 105 106 $107 = \overline{106}$ 108 109	 1 0 0 0 0 0 0 0 0 0 0	5×3 $168_1 = \chi_{73+}, \varphi_{65+}$ $252_1 = \chi_{75+}, \varphi_{67+}$ $420_8 = \chi_{76+}, \varphi_{68+}$ $672_2 = \chi_{79+}, \varphi_{70+}$ $840_6 = \chi_{81+}, \varphi_{71+}$ $1260_2 = \chi_{82+}, \varphi_{72+}$ $1260_3 = \chi_{83+}, \varphi_{73+}$ $1260_4 = \chi_{84+}, \varphi_{74+}$ $1680_1 = \chi_{85+}, \varphi_{75+}$ $1680_2 = \chi_{86+}, \varphi_{76+}$
$12_1.G :$	110 $111 = 110 * 7$ 112 $113 = 112 * 7$ 114 $115 = 114 * 7$ 116 $117 = 116 * 7$ 118 $119 = 118 * 7$ 120	 0 1 0 0 0 0 0	$168_2 = \chi_{87+}, \varphi_{77+}$ 5×3 $840_7 = \chi_{91+}, \varphi_{81+}$ $840_9 = \chi_{92+}, \varphi_{82+}$ $1008_1 = \chi_{95+}, \varphi_{83+}$ $1512_2 = \chi_{96+}, \varphi_{84+}$

	blocks	defect	matrix
	$121 = 120 * 7$ 122 $123 = 122 * 7$ 124 $125 = 124 * 7$	 0 0 	 $1680_3 = \chi_{97+}, \varphi_{85+}$ $1680_5 = \chi_{98+}, \varphi_{86+}$
$3_2.G :$	126 127 128 129 130 131 132 133 134	1 0 0 0 0 0 0 0 0	5×3 $252_1 = \chi_{102+}, \varphi_{89+}$ $378_1 = \chi_{103+}, \varphi_{90+}$ $630_3 = \chi_{104+}, \varphi_{91+}$ $630_4 = \chi_{105+}, \varphi_{92+}$ $630_5 = \chi_{106+}, \varphi_{93+}$ $1260_1 = \chi_{107+}, \varphi_{94+}$ $1512_1 = \chi_{110+}, \varphi_{96+}$ $1890_1 = \chi_{111+}, \varphi_{97+}$
$6_2.G :$	135 136 137 138 $139 = \overline{138}$ 140 141 142	1 0 0 0 0 0 0 0	5×3 $252_2 = \chi_{113+}, \varphi_{99+}$ $252_3 = \chi_{114+}, \varphi_{100+}$ $252_4 = \chi_{115+}, \varphi_{101+}$ $252_5 = \chi_{116+}, \varphi_{102+}$ $1008_1 = \chi_{119+}, \varphi_{105+}$ $1260_2 = \chi_{121+}, \varphi_{106+}$ $2520_1 = \chi_{123+}, \varphi_{107+}$
$12_2.G :$	143 $144 = 143 * 7$ 145 $146 = 145 * 7$ 147 $148 = 147 * 7$ 149 $150 = 149 * 7$ 151 $152 = 151 * 7$	1 0 0 0 0 0 0	5×3 $1008_2 = \chi_{128+}, \varphi_{111+}$ $1008_4 = \chi_{129+}, \varphi_{112+}$ $1512_2 = \chi_{131+}, \varphi_{113+}$ $2520_2 = \chi_{132+}, \varphi_{114+}$

Block 1:	$\varphi_{1,0}$	$\varphi_{5,0}$	$\varphi_{17,0}$
$1_1 = \chi_{1,0}$	1	.	.
$90_1 = \chi_{5,0}$	1	1	.
$640_1 = \chi_{17,0}$	.	.	1
$640_3 = \chi_{18,0}$	.	.	1
$729_1 = \chi_{19,0}$	.	1	1

$$\begin{aligned}\varphi_{1,0} &= 1_1 \\ \varphi_{5,0} &= 89_1 \\ \varphi_{17,0} &= 640_1\end{aligned}$$

Block 2:	$\varphi_{1,1}$	$\varphi_{5,1}$	$\varphi_{17,1}$
$1_2 = \chi_{1,1}$	1	.	.
$90_2 = \chi_{5,1}$	1	1	.
$640_2 = \chi_{17,1}$	.	.	1
$640_4 = \chi_{18,1}$	.	.	1
$729_2 = \chi_{19,1}$	.	1	1

$$\begin{aligned}\varphi_{1,1} &= 1_2 \\ \varphi_{5,1} &= 89_2 \\ \varphi_{17,1} &= 640_2\end{aligned}$$

Block 27:	$\varphi_{19,0}$	$\varphi_{27,0}$	$\varphi_{32,0}$
$20_1 = \chi_{21,0}$	1	.	.
$120_1 = \chi_{29,0}$	.	1	.
$540_1 = \chi_{34,0}$	1	.	1
$640_5 = \chi_{37,0}$	.	1	1
$640_7 = \chi_{38,0}$	.	1	1

$$\begin{aligned}\varphi_{19,0} &= 20_1 \\ \varphi_{27,0} &= 120_1 \\ \varphi_{32,0} &= 520_1\end{aligned}$$

Block 28:	$\varphi_{19,1}$	$\varphi_{27,1}$	$\varphi_{32,1}$
$20_2 = \chi_{21,1}$	1	.	.
$120_2 = \chi_{29,1}$	.	1	.
$540_2 = \chi_{34,1}$	1	.	1
$640_6 = \chi_{37,1}$	.	1	1
$640_8 = \chi_{38,1}$	.	1	1

$$\begin{aligned}\varphi_{19,1} &= 20_2 \\ \varphi_{27,1} &= 120_2 \\ \varphi_{32,1} &= 520_2\end{aligned}$$

Blocks 51, 53:	$\varphi_{36,0}$	$\varphi_{37,0}$	$\varphi_{47,0}$
$20_3 = \chi_{40,0}$	1	.	.
$120_3 = \chi_{41,0}$	.	1	.
$540_3 = \chi_{51,0}$	1	.	1
$640_{10} = \chi_{52,1}$	.	1	1
$640_{14} = \chi_{53,1}$	.	1	1

$$\begin{aligned}\varphi_{36,0} &= 20_3 \\ \varphi_{37,0} &= 120_3 \\ \varphi_{47,0} &= 520_3\end{aligned}$$

Blocks 52, 54:	$\varphi_{36,1}$	$\varphi_{37,1}$	$\varphi_{47,1}$	
$20_4 = \chi_{40,1}$	1	.	.	$\varphi_{36,1} = 20_4$
$120_4 = \chi_{41,1}$	.	1	.	$\varphi_{37,1} = 120_4$
$540_4 = \chi_{51,1}$	1	.	1	$\varphi_{47,1} = 520_4$
$640_9 = \chi_{52,0}$	.	1	1	
$640_{13} = \chi_{53,0}$	.	1	1	

Block 87:	φ_{50+}	φ_{58+}	φ_{59+}	
$30_1 = \chi_{56+}$	1	.	.	$\varphi_{50+} = 30_1$
$720_1 = \chi_{64+}$	.	1	.	$\varphi_{58+} = 720_1$
$720_2 = \chi_{65+}$	.	1	.	$\varphi_{59+} = 738_1$
$768_1 = \chi_{66+}$	1	.	1	
$1458_1 = \chi_{69+}$	.	1	1	

Block 99:	φ_{64+}	φ_{66+}	φ_{69+}	
$12_1 = \chi_{72+}$	1	.	.	$\varphi_{64+} = 12_1$
$240_1 = \chi_{74+}$	1	1	.	$\varphi_{66+} = 228_1$
$540_7 = \chi_{77+}$	.	.	1	$\varphi_{69+} = 540_1$
$540_8 = \chi_{78+}$	.	.	1	
$768_2 = \chi_{80+}$	.	1	1	

Block 112:	φ_{78+}	φ_{79+}	φ_{80+}	
$240_2 = \chi_{88+}$	1	.	.	$\varphi_{78+} = 240_1$
$432_1 = \chi_{89+}$	.	1	.	$\varphi_{79+} = 432_1$
$768_3 = \chi_{90+}$	1	.	1	$\varphi_{80+} = 528_1$
$960_1 = \chi_{93+}$	.	1	1	
$960_3 = \chi_{94+}$	.	1	1	

Block 126:	φ_{87+}	φ_{88+}	φ_{95+}	
$72_1 = \chi_{99+}$	1	.	.	$\varphi_{87+} = 72_1$
$90_3 = \chi_{100+}$	.	1	.	$\varphi_{88+} = 90_1$
$90_4 = \chi_{101+}$	.	1	.	$\varphi_{95+} = 1368_1$
$1440_1 = \chi_{108+}$	1	.	1	
$1458_1 = \chi_{109+}$	.	1	1	

Block 135:	φ_{98+}	φ_{103+}	φ_{104+}
$180_1 = \chi_{112+}$	1	.	.
$540_7 = \chi_{117+}$	.	1	.
$540_8 = \chi_{118+}$	.	1	.
$1080_1 = \chi_{120+}$	1	.	1
$1440_2 = \chi_{122+}$	.	1	1

$$\begin{aligned}\varphi_{98+} &= 180_1 \\ \varphi_{103+} &= 540_1 \\ \varphi_{104+} &= 900_1\end{aligned}$$

Block 143:	φ_{108+}	φ_{109+}	φ_{110+}
$72_2 = \chi_{124+}$	1	.	.
$432_1 = \chi_{125+}$	.	1	.
$720_1 = \chi_{126+}$	1	.	1
$720_3 = \chi_{127+}$	1	.	1
$1080_2 = \chi_{130+}$	.	1	1

$$\begin{aligned}\varphi_{108+} &= 72_2 \\ \varphi_{109+} &= 432_1 \\ \varphi_{110+} &= 648_1\end{aligned}$$