

$L_3(4).2_1 \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	7×6
	2	0	$35_1 = \chi_{3,0}, \varphi_{3,0}$
	3	0	$35_2 = \chi_{3,1}, \varphi_{3,1}$
	4	0	$35_3 = \chi_{4,0}, \varphi_{4,0}$
	5	0	$35_4 = \chi_{4,1}, \varphi_{4,1}$
	6	0	$35_5 = \chi_{5,0}, \varphi_{5,0}$
	7	0	$35_6 = \chi_{5,1}, \varphi_{5,1}$
	8	0	$126_1 = \chi_{8+}, \varphi_{7+}$
$2.G :$	9	1	7×6
	10	0	$56_1 = \chi_{13+}, \varphi_{11+}$
	11	0	$70_1 = \chi_{17,0}, \varphi_{14,0}$
	12	0	$70_2 = \chi_{17,1}, \varphi_{14,1}$
$4_1.G :$	13	1	5×3
	14	0	$112_1 = \chi_{21+}, \varphi_{17+}$
$4_2.G :$	15	1	5×3
	16	0	$56_2 = \chi_{26+}, \varphi_{20+}$
	$17 = \overline{16}$	0	$56_3 = \chi_{27+}, \varphi_{21+}$
$3.G :$	18	1	7×6
	$19 = 18^*$		
	20	0	$21_1 = \chi_{35,0}, \varphi_{27,0}$

	blocks	defect	matrix
	21	0	$21_2 = \chi_{35,1}, \varphi_{27,1}$
	$22 = 20^*$		
	$23 = 21^*$		
	24	0	$126_2 = \chi_{38+}, \varphi_{28+}$
	$25 = 24^*$		
	26	0	$84_1 = \chi_{40,0}, \varphi_{30,0}$
	27	0	$84_2 = \chi_{40,1}, \varphi_{30,1}$
	$28 = 26^*$		
	$29 = 27^*$		
$6.G :$	30	1	7×6
	$31 = 30^*$		
	32	0	$84_5 = \chi_{43+}, \varphi_{33+}$
	$33 = 32^*$		
$12_1.G :$	34	1	5×3
	$35 = 34 * 5$		
$12_2.G :$	36	1	5×3
	$37 = 36 * 5$		
	38	0	$168_1 = \chi_{58+}, \varphi_{42+}$
	$39 = 38 * 5$		

Block 1:	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{2,0}$	$\varphi_{2,1}$	$\varphi_{6,0}$	$\varphi_{6,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.
$1_2 = \chi_{1,1}$	.	1	.	.	.	.
$20_1 = \chi_{2,0}$	.	1	1	.	.	.
$20_2 = \chi_{2,1}$	1	.	.	1	.	.
$90_1 = \chi_{6+}$	.	.	.	.	1	1
$64_1 = \chi_{10,0}$	.	.	1	.	1	.
$64_2 = \chi_{10,1}$	.	.	.	1	.	1

$$\begin{aligned}
 \varphi_{1,0} &= 1_1 \\
 \varphi_{1,1} &= 1_2 \\
 \varphi_{2,0} &= 19_1 \\
 \varphi_{2,1} &= 19_2 \\
 \varphi_{6,0} &= 45_1 \\
 \varphi_{6,1} &= 45_2
 \end{aligned}$$

Block 9:	$\varphi_{9,0}$	$\varphi_{9,1}$	$\varphi_{10,0}$	$\varphi_{10,1}$	$\varphi_{13,0}$	$\varphi_{13,1}$	
$20_3 = \chi_{11+}$	1	1	.	.	.	.	$\varphi_{9,0} = 10_1$
$36_1 = \chi_{15,0}$	1	.	1	.	.	.	$\varphi_{9,1} = 10_2$
$36_2 = \chi_{15,1}$	.	1	.	1	.	.	$\varphi_{10,0} = 26_1$
$64_3 = \chi_{16,0}$	.	.	.	.	1	.	$\varphi_{10,1} = 26_2$
$64_4 = \chi_{16,1}$	.	.	.	.	.	1	$\varphi_{13,0} = 64_1$
$90_2 = \chi_{18,0}$	.	.	1	.	1	.	$\varphi_{13,1} = 64_2$
$90_3 = \chi_{18,1}$	.	.	.	1	.	1	

Block 13:	φ_{15+}	φ_{16+}	φ_{18+}	
$16_1 = \chi_{19+}$	1	.	.	$\varphi_{15+} = 16_1$
$16_2 = \chi_{20+}$	.	1	.	$\varphi_{16+} = 16_2$
$128_1 = \chi_{22+}$	.	.	1	$\varphi_{18+} = 128_1$
$160_1 = \chi_{23+}$	1	1	1	
$160_2 = \chi_{24+}$	1	1	1	

Block 15:	φ_{19+}	φ_{22+}	φ_{23+}	
$40_1 = \chi_{25+}$	1	.	.	$\varphi_{19+} = 40_1$
$72_1 = \chi_{28+}$	.	1	.	$\varphi_{22+} = 72_1$
$128_1 = \chi_{29+}$	1	.	1	$\varphi_{23+} = 88_1$
$160_1 = \chi_{30+}$	.	1	1	
$160_2 = \chi_{31+}$	.	1	1	

Blocks 18, 19:	$\varphi_{24,0}$	$\varphi_{24,1}$	$\varphi_{25,0}$	$\varphi_{25,1}$	$\varphi_{26,0}$	$\varphi_{26,1}$	
$15_1 = \chi_{32,0}$	1	.	.	.	.	.	$\varphi_{24,0} = 15_1$
$15_2 = \chi_{32,1}$	.	1	.	.	.	.	$\varphi_{24,1} = 15_2$
$15_5 = \chi_{33,0}$	.	.	1	.	.	.	$\varphi_{25,0} = 15_5$
$15_6 = \chi_{33,1}$	.	.	.	1	.	.	$\varphi_{25,1} = 15_6$
$15_9 = \chi_{34,0}$	.	.	.	.	1	.	$\varphi_{26,0} = 15_9$
$15_{10} = \chi_{34,1}$	.	.	.	.	.	1	$\varphi_{26,1} = 15_{10}$
$90_4 = \chi_{36+}$	1	1	1	1	1	1	

Blocks 30, 31:	$\varphi_{31,0}$	$\varphi_{31,1}$	$\varphi_{32,0}$	$\varphi_{32,1}$	$\varphi_{35,0}$	$\varphi_{35,1}$	
$6_1 = \chi_{41,0}$	1	.	.	.	.	.	$\varphi_{31,0} = 6_1$
$6_2 = \chi_{41,1}$	.	1	.	.	.	.	$\varphi_{31,1} = 6_2$
$36_3 = \chi_{42,0}$	.	.	1	.	.	.	$\varphi_{32,0} = 36_1$
$36_4 = \chi_{42,1}$	.	.	.	1	.	.	$\varphi_{32,1} = 36_2$
$120_1 = \chi_{45+}$	1	1	.	.	1	1	$\varphi_{35,0} = 54_1$
$90_6 = \chi_{47,0}$	.	.	.	1	1	.	$\varphi_{35,1} = 54_2$
$90_7 = \chi_{47,1}$	.	.	1	.	.	1	

Block 34:	φ_{36+}	φ_{37+}	φ_{38+}	
$48_1 = \chi_{48+}$	1	.	.	$\varphi_{36+} = 48_1$
$48_3 = \chi_{49+}$	1	.	.	$\varphi_{37+} = 96_1$
$96_1 = \chi_{50+}$	.	1	.	$\varphi_{38+} = 96_3$
$96_3 = \chi_{51+}$	.	.	1	
$240_1 = \chi_{52+}$	1	1	1	

Block 36:	φ_{39+}	φ_{40+}	φ_{41+}	
$72_2 = \chi_{53+}$	.	1	.	$\varphi_{39+} = 24_1$
$96_1 = \chi_{54+}$	.	.	1	$\varphi_{40+} = 72_2$
$96_3 = \chi_{55+}$	1	1	.	$\varphi_{41+} = 96_1$
$120_3 = \chi_{56+}$	1	.	1	
$120_5 = \chi_{57+}$	1	.	1	