

$L_3(4).2_2 \pmod{5}$

	blocks	defect	matrix
$G :$	1	1	5×4
	2	0	$20_1 = \chi_{2,0}, \varphi_{2,0}$
	3	0	$20_2 = \chi_{2,1}, \varphi_{2,1}$
	4	0	$35_1 = \chi_{3,0}, \varphi_{3,0}$
	5	0	$35_2 = \chi_{3,1}, \varphi_{3,1}$
	6	0	$70_1 = \chi_{4+}, \varphi_{4+}$
	7	0	$45_1 = \chi_{6,0}, \varphi_{6,0}$
	8	0	$45_2 = \chi_{6,1}, \varphi_{6,1}$
	$9 = \overline{7}$	0	$45_3 = \chi_{7,0}, \varphi_{7,0}$
	$10 = \overline{8}$	0	$45_4 = \chi_{7,1}, \varphi_{7,1}$
$2.G :$	11	0	$10_1 = \chi_{11,0}, \varphi_{9,0}$
	12	0	$10_2 = \chi_{11,1}, \varphi_{9,1}$
	$13 = \overline{11}$	0	$10_3 = \chi_{12,0}, \varphi_{10,0}$
	$14 = \overline{12}$	0	$10_4 = \chi_{12,1}, \varphi_{10,1}$
	15	1	5×4
	16	0	$70_2 = \chi_{17,0}, \varphi_{13,0}$
	$17 = \overline{16}$	0	$70_3 = \chi_{17,1}, \varphi_{13,1}$
	18	0	$90_1 = \chi_{18,0}, \varphi_{14,0}$
	19	0	$90_2 = \chi_{18,1}, \varphi_{14,1}$
$4_1.G :$	20	1	4×2
	21	0	$160_1 = \chi_{23+}, \varphi_{17+}$
	$22 = \overline{21}$	0	$160_2 = \chi_{24+}, \varphi_{18+}$
$4_2.G :$	23	0	$20_3 = \chi_{25,0}, \varphi_{19,0}$
	24	0	$20_4 = \chi_{25,1}, \varphi_{19,1}$
	$25 = 23*$		
	$26 = 24*$		
	27	1	5×4
	$28 = 27*$		

	blocks	defect	matrix
	29	0	$80_1 = \chi_{30,0}, \varphi_{22,0}$
	30	0	$80_2 = \chi_{30,1}, \varphi_{22,1}$
	$31 = 29*$		
	$32 = 30*$		
	$33 = \overline{31}$	0	$80_5 = \chi_{31,0}, \varphi_{23,0}$
	$34 = \overline{32}$	0	$80_6 = \chi_{31,1}, \varphi_{23,1}$
	$35 = 33*$		
	$36 = 34*$		
$3.G :$	37	0	$30_1 = \chi_{32+}, \varphi_{24+}$
	38	0	$30_2 = \chi_{33+}, \varphi_{25+}$
	$39 = \overline{38}$	0	$30_3 = \chi_{34+}, \varphi_{26+}$
	40	1	4×2
	41	0	$90_3 = \chi_{36+}, \varphi_{28+}$
	$42 = \overline{41}$	0	$90_4 = \chi_{37+}, \varphi_{29+}$
$6.G :$	43	1	4×2
	44	0	$120_1 = \chi_{45+}, \varphi_{33+}$
	$45 = \overline{44}$	0	$120_2 = \chi_{46+}, \varphi_{34+}$
	46	0	$180_1 = \chi_{47+}, \varphi_{35+}$
$12_1.G :$	47	1	4×2
	48	1	4×2
	49	0	$240_1 = \chi_{52+}, \varphi_{38+}$
	50	0	$240_2 = \chi_{52*5+}, \varphi_{38*5+}$
$12_2.G :$	51	1	4×2
	$52 = 51 * 7$		
	53	0	$120_3 = \chi_{56+}, \varphi_{41+}$
	$54 = 53 * 7$		
	$55 = \overline{54}$	0	$120_5 = \chi_{57+}, \varphi_{42+}$
	$56 = 55 * 7$		

Block 1:	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{8,0}$	$\varphi_{8,1}$
$1_1 = \chi_{1,0}$	1	.	.	.
$1_2 = \chi_{1,1}$	.	1	.	.
$126_1 = \chi_{8+}$	.	.	1	1
$64_1 = \chi_{10,0}$	1	.	1	.
$64_2 = \chi_{10,1}$	.	1	.	1

$$\begin{aligned}
 \varphi_{1,0} &= 1_1 \\
 \varphi_{1,1} &= 1_2 \\
 \varphi_{8,0} &= 63_1 \\
 \varphi_{8,1} &= 63_2
 \end{aligned}$$

Block 15:	$\varphi_{11,0}$	$\varphi_{11,1}$	$\varphi_{12,0}$	$\varphi_{12,1}$	
$56_1 = \chi_{13+}$	1	1	.	.	$\varphi_{11,0} = 28_1$
$36_1 = \chi_{15,0}$	.	.	1	.	$\varphi_{11,1} = 28_2$
$36_2 = \chi_{15,1}$	.	.	.	1	$\varphi_{12,0} = 36_1$
$64_3 = \chi_{16,0}$	1	.	1	.	$\varphi_{12,1} = 36_2$
$64_4 = \chi_{16,1}$	.	1	.	1	

Block 20:	φ_{15+}	φ_{16+}	
$16_1 = \chi_{19+}$	1	.	$\varphi_{15+} = 16_1$
$16_2 = \chi_{20+}$	1	.	$\varphi_{16+} = 112_1$
$112_1 = \chi_{21+}$	.	1	
$128_1 = \chi_{22+}$	1	1	

Blocks 27, 28:	$\varphi_{20,0}$	$\varphi_{20,1}$	$\varphi_{21,0}$	$\varphi_{21,1}$	
$56_2 = \chi_{26+}$	1	1	.	.	$\varphi_{20,0} = 28_3$
$36_3 = \chi_{28,0}$	.	.	1	.	$\varphi_{20,1} = 28_4$
$36_4 = \chi_{28,1}$	.	.	.	1	$\varphi_{21,0} = 36_3$
$64_5 = \chi_{29,0}$	1	.	1	.	$\varphi_{21,1} = 36_4$
$64_6 = \chi_{29,1}$	.	1	.	1	

Block 40:	φ_{27+}	φ_{30+}	
$42_1 = \chi_{35+}$	1	.	$\varphi_{27+} = 42_1$
$126_2 = \chi_{38+}$	.	1	$\varphi_{30+} = 126_1$
$126_3 = \chi_{39+}$	.	1	
$168_1 = \chi_{40+}$	1	1	

Block 43:	φ_{31+}	φ_{32+}	
$12_1 = \chi_{41+}$	1	.	$\varphi_{31+} = 12_1$
$72_1 = \chi_{42+}$	.	1	$\varphi_{32+} = 72_1$
$84_1 = \chi_{43+}$	1	1	
$84_2 = \chi_{44+}$	1	1	

Block 47:	φ_{36+}	φ_{37+}	
$48_1 = \chi_{48+}$	1	.	$\varphi_{36+} = 48_1$
$48_3 = \chi_{49+}$	.	1	$\varphi_{37+} = 48_3$
$96_1 = \chi_{50+}$	1	1	
$96_4 = \chi_{51+}$	1	1	

Block 48:	φ_{36*29+}	φ_{37*29+}	
$48_2 = \chi_{48*29+}$	1	.	$\varphi_{36*29+} = 48_2$
$48_4 = \chi_{49*29+}$	.	1	$\varphi_{37*29+} = 48_4$
$96_2 = \chi_{50*41+}$	1	1	
$96_3 = \chi_{50*31+}$	1	1	

Block 51:	φ_{39+}	φ_{40+}	
$72_2 = \chi_{53+}$	1	.	$\varphi_{39+} = 72_2$
$96_1 = \chi_{54+}$	.	1	$\varphi_{40+} = 96_1$
$96_2 = \chi_{55+}$	.	1	
$168_2 = \chi_{58+}$	1	1	