

$L_3(4).2_1 \pmod{5}$

	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	$35_3 = \chi_{4,0}, \varphi_{4,0}$
	7	0	$35_4 = \chi_{4,1}, \varphi_{4,1}$
	8	0	$35_5 = \chi_{5,0}, \varphi_{5,0}$
	9	0	$35_6 = \chi_{5,1}, \varphi_{5,1}$
	10	0	$90_1 = \chi_{6+}, \varphi_{6+}$
$2.G :$	11	0	$20_3 = \chi_{11+}, \varphi_{9+}$
	12	1	5×4
	13	0	$70_1 = \chi_{17,0}, \varphi_{13,0}$
	14	0	$70_2 = \chi_{17,1}, \varphi_{13,1}$
	15	0	$90_2 = \chi_{18,0}, \varphi_{14,0}$
	16	0	$90_3 = \chi_{18,1}, \varphi_{14,1}$
$4_1.G :$	17	1	4×2
	18	0	$160_1 = \chi_{23+}, \varphi_{17+}$
	19	0	$160_2 = \chi_{24+}, \varphi_{18+}$
$4_2.G :$	20	0	$40_1 = \chi_{25+}, \varphi_{19+}$
	21	1	4×2
	22	0	$160_1 = \chi_{30+}, \varphi_{22+}$
	23	0	$160_2 = \chi_{31+}, \varphi_{23+}$
$3.G :$	24	0	$15_1 = \chi_{32,0}, \varphi_{24,0}$
	25	0	$15_2 = \chi_{32,1}, \varphi_{24,1}$
	$26 = 24^*$		
	$27 = 25^*$		
	28	0	$15_5 = \chi_{33,0}, \varphi_{25,0}$
	29	0	$15_6 = \chi_{33,1}, \varphi_{25,1}$

	blocks	defect	matrix
	$30 = 28^*$		
	$31 = 29^*$		
	32	0	$15_9 = \chi_{34,0}, \varphi_{26,0}$
	33	0	$15_{10} = \chi_{34,1}, \varphi_{26,1}$
	$34 = 32^*$		
	$35 = 33^*$		
	36	1	5×4
	$37 = 36^*$		
	38	0	$90_4 = \chi_{36+}, \varphi_{28+}$
	$39 = 38^*$		
$6.G :$	40	1	5×4
	$41 = 40^*$		
	42	0	$120_1 = \chi_{45+}, \varphi_{33+}$
	$43 = 42^*$		
	44	0	$90_6 = \chi_{47,0}, \varphi_{35,0}$
	45	0	$90_7 = \chi_{47,1}, \varphi_{35,1}$
	$46 = 44^*$		
	$47 = 45^*$		
$12_1.G :$	48	1	4×2
	$49 = 48 * 5$		
	50	0	$240_1 = \chi_{52+}, \varphi_{38+}$
	$51 = 50 * 5$		
$12_2.G :$	52	1	4×2
	$53 = 52 * 5$		
	54	0	$120_3 = \chi_{56+}, \varphi_{41+}$
	$55 = 54 * 5$		
	$56 = 54 * 7$		
	$57 = 54 * 11$		

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 12:	$\varphi_{11,0}$	$\varphi_{11,1}$	$\varphi_{12,0}$	$\varphi_{12,1}$	
$56_1 = \chi_{13+}$	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 17:	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	

Block 21:	φ_{20+}	φ_{21+}	
$56_2 = \chi_{26+}$	1	.	$\varphi_{20+} = 56_1$
$56_3 = \chi_{27+}$	1	.	$\varphi_{21+} = 72_1$
$72_1 = \chi_{28+}$	.	1	
$128_1 = \chi_{29+}$	1	1	

Blocks 36, 37:	$\varphi_{27,0}$	$\varphi_{27,1}$	$\varphi_{30,0}$	$\varphi_{30,1}$	
$21_1 = \chi_{35,0}$	1	.	.	.	$\varphi_{27,0} = 21_1$
$21_2 = \chi_{35,1}$	.	1	.	.	$\varphi_{27,1} = 21_2$
$126_2 = \chi_{38+}$	.	.	1	1	$\varphi_{30,0} = 63_3$
$84_1 = \chi_{40,0}$	1	.	1	.	$\varphi_{30,1} = 63_4$
$84_2 = \chi_{40,1}$	.	1	.	1	

Blocks 40, 41:	$\varphi_{31,0}$	$\varphi_{31,1}$	$\varphi_{32,0}$	$\varphi_{32,1}$	
$6_1 = \chi_{41,0}$	1	.	.	.	$\varphi_{31,0} = 6_1$
$6_2 = \chi_{41,1}$	.	1	.	.	$\varphi_{31,1} = 6_2$
$36_3 = \chi_{42,0}$	.	.	1	.	$\varphi_{32,0} = 36_3$
$36_4 = \chi_{42,1}$	.	.	.	1	$\varphi_{32,1} = 36_4$
$84_5 = \chi_{43+}$	1	1	1	1	

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

Block 52:	φ_{39+}	φ_{40+}		
$72_2 = \chi_{53+}$	1	.	φ_{39+}	$= 72_2$
$96_1 = \chi_{54+}$	.	1	φ_{40+}	$= 96_1$
$96_3 = \chi_{55+}$	.	1		
$168_1 = \chi_{58+}$	1	1		