

# $L_3(7) \pmod{3}$

	blocks	defect	matrix		blocks	defect	matrix
$3.G :$	1	3	$16 \times 5$		9	1	$3 \times 1$
	2	2	$9 \times 2$		10	1	$3 \times 1$
	3	1	$3 \times 1$		11	1	$3 \times 1$
	$4 = \bar{3}$	1	$3 \times 1$		12	1	$3 \times 1$
	5	1	$3 \times 1$		$13 = \bar{12}$	1	$3 \times 1$
	$6 = \bar{5}$	1	$3 \times 1$		14	1	$3 \times 1$
	7	1	$3 \times 1$		$15 = \bar{14}$	1	$3 \times 1$
	$8 = \bar{7}$	1	$3 \times 1$				

<b>Block 1:</b>	$\varphi_1$	$\varphi_2$	$\varphi_4$	$\varphi_5$	$\varphi_6$
$1_1 = \chi_1$	1	.	.	.	.
$56_1 = \chi_2$	1	1	.	.	.
$152_1 = \chi_4$	1	1	1	.	.
$152_2 = \chi_5$	1	1	.	1	.
$152_3 = \chi_6$	1	1	.	.	1
$343_1 = \chi_{20}$	.	1	1	1	1
$57_2 = \chi_{23}$	2	1	.	.	.
$57_3 = \chi_{23}^{*2}$	2	1	.	.	.
$96_1 = \chi_{25}$	.	.	1	.	.
$96_2 = \chi_{25}^{*2}$	.	.	1	.	.
$96_3 = \chi_{26}$	.	.	.	1	.
$96_4 = \chi_{26}^{*2}$	.	.	.	1	.
$96_5 = \chi_{27}$	.	.	.	.	1
$96_6 = \chi_{27}^{*2}$	.	.	.	.	1
$399_2 = \chi_{41}$	1	2	1	1	1
$399_3 = \chi_{41}^{*2}$	1	2	1	1	1

$$\begin{aligned}
 \varphi_1 &= 1_1 \\
 \varphi_2 &= 55_1 \\
 \varphi_4 &= 96_1 \\
 \varphi_5 &= 96_2 \\
 \varphi_6 &= 96_3
 \end{aligned}$$

<b>Block 2:</b>	$\varphi_3$	$\varphi_{20}$
$57_1 = \chi_3$	1	.
$399_1 = \chi_{21}$	.	1
$456_1 = \chi_{22}$	1	1
$57_4 = \chi_{24}$	1	.
$57_5 = \chi_{24}^{*2}$	1	.
$399_4 = \chi_{42}$	.	1
$399_5 = \chi_{42}^{*2}$	.	1
$456_2 = \chi_{43}$	1	1
$456_3 = \chi_{43}^{*2}$	1	1

$$\begin{aligned}\varphi_3 &= 57_1 \\ \varphi_{20} &= 399_1\end{aligned}$$

<b>Block 3:</b>	$\varphi_7$
$288_1 = \chi_7$	1
$288_7 = \chi_{28}$	1
$288_8 = \chi_{28}^{*20}$	1

$$\varphi_7 = 288_1$$

<b>Block 4:</b>	$\varphi_8$
$288_2 = \chi_8$	1
$288_9 = \chi_{29}$	1
$288_{10} = \chi_{29}^{*20}$	1

$$\varphi_8 = 288_2$$

<b>Block 5:</b>	$\varphi_9$
$288_3 = \chi_9$	1
$288_{11} = \chi_{30}$	1
$288_{12} = \chi_{30}^{*20}$	1

$$\varphi_9 = 288_3$$

<b>Block 6:</b>	$\varphi_{10}$
$288_4 = \chi_{10}$	1
$288_{13} = \chi_{31}$	1
$288_{14} = \chi_{31}^{*20}$	1

$$\varphi_{10} = 288_4$$

<b>Block 7:</b>	$\varphi_{11}$
$288_5 = \chi_{11}$	1
$288_{15} = \chi_{32}$ $288_{16} = \chi_{32}^{*20}$	1 1

$$\varphi_{11} = 288_5$$

<b>Block 8:</b>	$\varphi_{12}$
$288_6 = \chi_{12}$	1
$288_{17} = \chi_{33}$ $288_{18} = \chi_{33}^{*20}$	1 1

$$\varphi_{12} = 288_6$$

<b>Block 9:</b>	$\varphi_{13}$
$342_1 = \chi_{13}$	1
$342_8 = \chi_{34}$ $342_9 = \chi_{34}^{*2}$	1 1

$$\varphi_{13} = 342_1$$

<b>Block 10:</b>	$\varphi_{14}$
$342_2 = \chi_{14}$	1
$342_{10} = \chi_{35}$ $342_{11} = \chi_{35}^{*17}$	1 1

$$\varphi_{14} = 342_2$$

<b>Block 11:</b>	$\varphi_{15}$
$342_3 = \chi_{15}$	1
$342_{12} = \chi_{36}$ $342_{13} = \chi_{36}^{*17}$	1 1

$$\varphi_{15} = 342_3$$

<b>Block 12:</b>	$\varphi_{16}$
$342_4 = \chi_{16}$	1
$342_{14} = \chi_{37}$	1
$342_{15} = \chi_{37}^{*17}$	1

$$\varphi_{16} = 342_4$$

<b>Block 13:</b>	$\varphi_{17}$
$342_5 = \chi_{17}$	1
$342_{16} = \chi_{38}$	1
$342_{17} = \chi_{38}^{*17}$	1

$$\varphi_{17} = 342_5$$

<b>Block 14:</b>	$\varphi_{18}$
$342_6 = \chi_{18}$	1
$342_{18} = \chi_{39}$	1
$342_{19} = \chi_{39}^{*17}$	1

$$\varphi_{18} = 342_6$$

<b>Block 15:</b>	$\varphi_{19}$
$342_7 = \chi_{19}$	1
$342_{20} = \chi_{40}$	1
$342_{21} = \chi_{40}^{*17}$	1

$$\varphi_{19} = 342_7$$