

## $G_2(3) \pmod{7}$

	blocks	defect	matrix
$G :$	1	1	$7 \times 6$
	2	0	$14_1 = \chi_2, \varphi_2$
	3	0	$91_1 = \chi_6, \varphi_6$
	4	0	$91_2 = \chi_7, \varphi_7$
	5	0	$91_3 = \chi_8, \varphi_8$
	6	0	$168_1 = \chi_{10}, \varphi_{10}$
	7	0	$182_1 = \chi_{11}, \varphi_{11}$
	8	0	$182_2 = \chi_{12}, \varphi_{12}$
	9	0	$273_1 = \chi_{13}, \varphi_{13}$
	10	0	$273_2 = \chi_{14}, \varphi_{14}$
	11	0	$448_1 = \chi_{15}, \varphi_{15}$
	12	0	$448_2 = \chi_{16}, \varphi_{16}$
	13	0	$546_1 = \chi_{17}, \varphi_{17}$
	14	0	$546_2 = \chi_{18}, \varphi_{18}$

	blocks	defect	matrix
	15	0	$728_1 = \chi_{19}, \varphi_{20}$
	16	0	$728_2 = \chi_{20}, \varphi_{21}$
	17	0	$819_1 = \chi_{22}, \varphi_{22}$
$3.G :$	18	1	$7 \times 6$
	19 = 18*		
	20	0	$189_1 = \chi_{26}, \varphi_{25}$
	21 = 20*		
	22	0	$189_3 = \chi_{27}, \varphi_{26}$
	23 = 22*		
	24	0	$378_1 = \chi_{31}, \varphi_{30}$
	25 = 24*		
	26	0	$378_3 = \chi_{32}, \varphi_{31}$
	27 = 26*		

<b>Block 1:</b>	$\varphi_1$	$\varphi_3$	$\varphi_4$	$\varphi_5$	$\varphi_9$	$\varphi_{19}$
$1_1 = \chi_1$	1	.	.	.	.	.
$64_1 = \chi_3$	.	1	.	.	.	.
$64_2 = \chi_4$	.	.	1	.	.	.
$78_1 = \chi_5$	.	.	.	1	.	.
$104_1 = \chi_9$	1	.	.	.	1	.
$729_1 = \chi_{21}$	.	.	.	.	1	1
$832_1 = \chi_{23}$	.	1	1	1	.	1

$$\begin{aligned}
 \varphi_1 &= 1_1 \\
 \varphi_3 &= 64_1 \\
 \varphi_4 &= 64_2 \\
 \varphi_5 &= 78_1 \\
 \varphi_9 &= 103_1 \\
 \varphi_{19} &= 626_1
 \end{aligned}$$

<b>Blocks 18, 19:</b>	$\varphi_{23}$	$\varphi_{24}$	$\varphi_{27}$	$\varphi_{28}$	$\varphi_{29}$	$\varphi_{32}$
$27_1 = \chi_{24}$	1	.	.	.	.	.
$27_3 = \chi_{25}$	.	1	.	.	.	.
$351_1 = \chi_{28}$	1	1	1	.	.	.
$351_3 = \chi_{29}$	.	.	.	1	.	.
$351_5 = \chi_{30}$	.	.	.	.	1	.
$729_2 = \chi_{33}$	.	.	.	.	.	1
$1728_1 = \chi_{34}$	.	.	1	1	1	1

$$\begin{aligned}
 \varphi_{23} &= 27_1 \\
 \varphi_{24} &= 27_3 \\
 \varphi_{27} &= 297_1 \\
 \varphi_{28} &= 351_1 \\
 \varphi_{29} &= 351_3 \\
 \varphi_{32} &= 729_1
 \end{aligned}$$