

$S_4(5) \pmod{3}$

	blocks	defect	matrix		blocks	defect	matrix
$G :$	1	2	9×5	$2.G :$	11	1	3×2
	2	2	9×5		12	1	3×2
	3	1	3×2		13	2	9×4
	4	1	3×2		14	1	3×2
	5	0	$90_1 = \chi_9, \varphi_9$		15	0	$468_1 = \chi_{50}, \varphi_{32}$
	6	1	3×2		16	0	$468_2 = \chi_{51}, \varphi_{33}$
	7	1	3×2		17	0	$576_4 = \chi_{53}, \varphi_{34}$
	8	0	$576_1 = \chi_{28}, \varphi_{19}$		18	0	$576_5 = \chi_{54}, \varphi_{35}$
	9	0	$576_2 = \chi_{29}, \varphi_{20}$		19	0	$576_6 = \chi_{55}, \varphi_{36}$
	10	0	$576_3 = \chi_{30}, \varphi_{21}$		20	1	3×1

Block 1:	φ_1	φ_4	φ_5	φ_6	φ_{18}	
$1_1 = \chi_1$	1	.	.	.	.	
$40_1 = \chi_4$	.	1	.	.	.	$\varphi_1 = 1_1$
$65_1 = \chi_5$	1	.	1	.	.	$\varphi_4 = 40_1$
$65_2 = \chi_6$	1	.	.	1	.	$\varphi_5 = 64_1$
$104_1 = \chi_{10}$	.	1	1	.	.	$\varphi_6 = 64_2$
$104_3 = \chi_{12}$	.	1	.	1	.	$\varphi_{18} = 456_1$
$520_1 = \chi_{25}$	.	.	1	.	1	
$520_2 = \chi_{26}$	.	.	.	1	1	
$625_1 = \chi_{33}$	1	1	1	1	1	

Block 2:	φ_2	φ_3	φ_{10}	φ_{12}	φ_{13}	
$13_1 = \chi_2$	1	.	.	.	.	
$13_2 = \chi_3$	.	1	.	.	.	$\varphi_2 = 13_1$
$104_2 = \chi_{11}$	.	.	1	.	.	$\varphi_3 = 13_2$
$130_1 = \chi_{13}$	1	1	1	.	.	$\varphi_{10} = 104_1$
$208_1 = \chi_{15}$	.	.	.	1	.	$\varphi_{12} = 208_1$
$208_2 = \chi_{16}$	.	.	.	.	1	$\varphi_{13} = 208_2$
$325_1 = \chi_{21}$	.	1	1	1	.	
$325_2 = \chi_{22}$	1	.	1	.	1	
$520_3 = \chi_{27}$	.	.	1	1	1	

Block 3:	φ_7	φ_{14}
$78_1 = \chi_7$	1	.
$312_1 = \chi_{17}$	.	1
$390_1 = \chi_{23}$	1	1

$$\begin{aligned}\varphi_7 &= 78_1 \\ \varphi_{14} &= 312_1\end{aligned}$$

Block 4:	φ_8	φ_{15}
$78_2 = \chi_8$	1	.
$312_2 = \chi_{18}$	.	1
$390_2 = \chi_{24}$	1	1

$$\begin{aligned}\varphi_8 &= 78_2 \\ \varphi_{15} &= 312_2\end{aligned}$$

Block 6:	φ_{11}	φ_{22}
$156_1 = \chi_{14}$	1	.
$624_1 = \chi_{31}$	.	1
$780_1 = \chi_{34}$	1	1

$$\begin{aligned}\varphi_{11} &= 156_1 \\ \varphi_{22} &= 624_1\end{aligned}$$

Block 7:	φ_{16}	φ_{17}
$312_3 = \chi_{19}$	1	.
$312_4 = \chi_{20}$	.	1
$624_2 = \chi_{32}$	1	1

$$\begin{aligned}\varphi_{16} &= 312_3 \\ \varphi_{17} &= 312_4\end{aligned}$$

Block 11:	φ_{23}	φ_{30}
$12_1 = \chi_{35}$	1	.
$300_1 = \chi_{45}$	.	1
$312_5 = \chi_{47}$	1	1

$$\begin{aligned}\varphi_{23} &= 12_1 \\ \varphi_{30} &= 300_1\end{aligned}$$

Block 12:	φ_{24}	φ_{31}
$12_2 = \chi_{36}$	1	.
$300_2 = \chi_{46}$	.	1
$312_6 = \chi_{48}$	1	1

$$\begin{aligned}\varphi_{24} &= 12_2 \\ \varphi_{31} &= 300_2\end{aligned}$$

Block 13:	φ_{25}	φ_{26}	φ_{28}	φ_{29}	
$52_1 = \chi_{37}$	1	.	.	.	
$52_2 = \chi_{38}$	.	1	.	.	
$104_4 = \chi_{39}$	1	1	.	.	$\varphi_{25} = 52_1$
$208_3 = \chi_{41}$	.	.	1	.	$\varphi_{26} = 52_2$
$208_4 = \chi_{42}$	.	.	.	1	$\varphi_{28} = 208_3$
$260_1 = \chi_{43}$	.	1	.	1	$\varphi_{29} = 208_4$
$260_2 = \chi_{44}$	1	.	1	.	
$416_1 = \chi_{49}$	.	.	1	1	
$520_4 = \chi_{52}$	1	1	1	1	

Block 14:	φ_{27}	φ_{37}	
$156_2 = \chi_{40}$	1	.	$\varphi_{27} = 156_2$
$624_3 = \chi_{56}$	.	1	$\varphi_{37} = 624_2$
$780_2 = \chi_{60}$	1	1	

Block 20:	φ_{38}	
$624_4 = \chi_{57}$	1	$\varphi_{38} = 624_3$
$624_5 = \chi_{58}$	1	
$624_6 = \chi_{59}$	1	