

$S_6(3) \pmod{5}$

	blocks	defect	matrix
$G :$	1	1	5×4
	2	1	5×4
	$3 = \overline{2}$	1	5×4
	4	1	5×4
	5	1	5×4
	$6 = \overline{5}$	1	5×4
	7	0	$105_1 = \chi_7, \varphi_7$
	8	0	$195_1 = \chi_9, \varphi_9$
	9	0	$455_1 = \chi_{12}, \varphi_{12}$
	$10 = \overline{9}$	0	$455_2 = \chi_{13}, \varphi_{13}$
	11	1	5×4
	12	0	$1170_1 = \chi_{19}, \varphi_{19}$
	$13 = \overline{12}$	0	$1170_2 = \chi_{20}, \varphi_{20}$
	14	0	$1365_1 = \chi_{21}, \varphi_{21}$
	$15 = \overline{14}$	0	$1365_2 = \chi_{22}, \varphi_{22}$
	16	0	$1365_3 = \chi_{23}, \varphi_{23}$
	$17 = \overline{16}$	0	$1365_4 = \chi_{24}, \varphi_{24}$
	18	0	$1365_5 = \chi_{25}, \varphi_{25}$
	$19 = \overline{18}$	0	$1365_6 = \chi_{26}, \varphi_{26}$
	20	0	$1820_1 = \chi_{27}, \varphi_{27}$
	21	0	$1820_2 = \chi_{28}, \varphi_{28}$
	$22 = \overline{21}$	0	$1820_3 = \chi_{29}, \varphi_{29}$
	23	0	$2730_1 = \chi_{36}, \varphi_{36}$
	24	0	$2835_1 = \chi_{37}, \varphi_{37}$
	25	0	$3640_1 = \chi_{38}, \varphi_{38}$
	$26 = \overline{25}$	0	$3640_2 = \chi_{39}, \varphi_{39}$
	27	0	$4095_1 = \chi_{40}, \varphi_{41}$
	$28 = \overline{27}$	0	$4095_2 = \chi_{41}, \varphi_{42}$
	29	0	$5265_1 = \chi_{43}, \varphi_{43}$
	30	0	$5460_1 = \chi_{44}, \varphi_{46}$
	31	0	$5460_2 = \chi_{45}, \varphi_{47}$
	32	0	$5460_3 = \chi_{46}, \varphi_{48}$
	$33 = \overline{32}$	0	$5460_4 = \chi_{47}, \varphi_{49}$
	34	0	$8190_1 = \chi_{55}, \varphi_{52}$
	35	0	$10920_1 = \chi_{58}, \varphi_{55}$
	$36 = \overline{35}$	0	$10920_2 = \chi_{59}, \varphi_{56}$
	37	0	$12285_1 = \chi_{63}, \varphi_{57}$
	$38 = \overline{37}$	0	$12285_2 = \chi_{64}, \varphi_{58}$
	39	0	$14560_1 = \chi_{65}, \varphi_{59}$
	40	0	$14560_2 = \chi_{66}, \varphi_{60}$

	blocks	defect	matrix
	41 = $\overline{40}$	0	14560 ₃ = χ_{67}, φ_{61}
	42	0	16380 ₁ = χ_{68}, φ_{62}
	43	0	16640 ₁ = χ_{69}, φ_{63}
	44	0	16640 ₂ = χ_{70}, φ_{64}
	45	0	17920 ₁ = χ_{72}, φ_{66}
	46	0	17920 ₂ = χ_{73}, φ_{67}
2.G :	47	1	5 × 4
	48 = $\overline{47}$	1	5 × 4
	49	1	5 × 4
	50	1	5 × 4
	51 = $\overline{50}$	1	5 × 4
	52	1	5 × 4
	53	0	520 ₁ = χ_{82}, φ_{75}
	54	0	910 ₁ = χ_{85}, φ_{78}
	55 = $\overline{54}$	0	910 ₂ = χ_{86}, φ_{79}
	56	1	5 × 4
	57	0	1260 ₁ = χ_{92}, φ_{85}
	58 = $\overline{57}$	0	1260 ₂ = χ_{93}, φ_{86}
	59	0	1820 ₄ = χ_{94}, φ_{87}
	60 = $\overline{59}$	0	1820 ₅ = χ_{95}, φ_{88}
	61	0	2730 ₂ = χ_{96}, φ_{89}
	62	0	2730 ₃ = χ_{97}, φ_{90}
	63	0	2730 ₄ = χ_{98}, φ_{91}
	64 = $\overline{63}$	0	2730 ₅ = χ_{99}, φ_{92}
	65	0	2730 ₆ = χ_{100}, φ_{93}
	66 = $\overline{65}$	0	2730 ₇ = χ_{101}, φ_{94}
	67	0	3120 ₁ = χ_{102}, φ_{97}
	68	0	3640 ₃ = χ_{105}, φ_{98}
	69 = $\overline{68}$	0	3640 ₄ = χ_{106}, φ_{99}
	70	0	5460 ₅ = $\chi_{112}, \varphi_{105}$
	71	0	5460 ₆ = $\chi_{113}, \varphi_{106}$
	72 = $\overline{71}$	0	5460 ₇ = $\chi_{114}, \varphi_{107}$
	73	0	7280 ₁ = $\chi_{118}, \varphi_{110}$
	74	0	7280 ₂ = $\chi_{119}, \varphi_{111}$
	75 = $\overline{74}$	0	7280 ₃ = $\chi_{120}, \varphi_{112}$
	76	0	8190 ₂ = $\chi_{121}, \varphi_{113}$
	77 = $\overline{76}$	0	8190 ₃ = $\chi_{122}, \varphi_{114}$
	78	0	10920 ₃ = $\chi_{127}, \varphi_{117}$
	79 = $\overline{78}$	0	10920 ₄ = $\chi_{128}, \varphi_{118}$
	80	0	14040 ₁ = $\chi_{132}, \varphi_{122}$

	blocks	defect	matrix
	81	0	$16640_3 = \chi_{136}, \varphi_{123}$
	82	0	$16640_4 = \chi_{137}, \varphi_{124}$
	83	0	$17920_3 = \chi_{139}, \varphi_{125}$
	84	0	$17920_4 = \chi_{140}, \varphi_{126}$
	85	0	$21840_1 = \chi_{141}, \varphi_{127}$

Block 1:	φ_1	φ_{18}	φ_{32}	φ_{40}	
$1_1 = \chi_1$	1	.	.	.	$\varphi_1 = 1_1$
$819_1 = \chi_{18}$	1	1	.	.	$\varphi_{18} = 818_1$
$2106_1 = \chi_{30}$	.	.	1	.	$\varphi_{32} = 2106_1$
$4536_1 = \chi_{42}$	.	1	.	1	$\varphi_{40} = 3718_1$
$5824_1 = \chi_{48}$	.	.	1	1	

Block 2:	φ_2	φ_{11}	φ_{34}	φ_{53}	
$13_1 = \chi_2$	1	.	.	.	$\varphi_2 = 13_1$
$273_2 = \chi_{11}$	.	1	.	.	$\varphi_{11} = 273_2$
$2457_3 = \chi_{35}$	1	.	1	.	$\varphi_{34} = 2444_1$
$9477_1 = \chi_{56}$	.	1	.	1	$\varphi_{53} = 9204_1$
$11648_3 = \chi_{62}$	.	.	1	1	

Block 3:	φ_3	φ_{10}	φ_{35}	φ_{54}	
$13_2 = \chi_3$	1	.	.	.	$\varphi_3 = 13_2$
$273_1 = \chi_{10}$	.	1	.	.	$\varphi_{10} = 273_1$
$2457_2 = \chi_{34}$	1	.	1	.	$\varphi_{35} = 2444_2$
$9477_2 = \chi_{57}$	.	1	.	1	$\varphi_{54} = 9204_2$
$11648_2 = \chi_{61}$	.	.	1	1	

Block 4:	φ_4	φ_8	φ_{33}	φ_{65}	
$78_1 = \chi_4$	1	.	.	.	$\varphi_4 = 78_1$
$168_1 = \chi_8$	.	1	.	.	$\varphi_8 = 168_1$
$2457_1 = \chi_{33}$	.	1	1	.	$\varphi_{33} = 2289_1$
$17472_1 = \chi_{71}$	1	.	.	1	$\varphi_{65} = 17394_1$
$19683_1 = \chi_{74}$	.	.	1	1	

Block 5:	φ_5	φ_{14}	φ_{30}	φ_{44}
$91_1 = \chi_5$	1	.	.	.
$546_1 = \chi_{14}$	.	1	.	.
$2184_2 = \chi_{32}$	1	.	1	.
$5824_2 = \chi_{49}$	.	1	.	1
$7371_1 = \chi_{53}$	.	.	1	1

$$\begin{aligned}
\varphi_5 &= 91_1 \\
\varphi_{14} &= 546_1 \\
\varphi_{30} &= 2093_1 \\
\varphi_{44} &= 5278_1
\end{aligned}$$

Block 6:	φ_6	φ_{15}	φ_{31}	φ_{45}
$91_2 = \chi_6$	1	.	.	.
$546_2 = \chi_{15}$	.	1	.	.
$2184_1 = \chi_{31}$	1	.	1	.
$5824_3 = \chi_{50}$	.	1	.	1
$7371_2 = \chi_{54}$	.	.	1	1

$$\begin{aligned}
\varphi_6 &= 91_2 \\
\varphi_{15} &= 546_2 \\
\varphi_{31} &= 2093_2 \\
\varphi_{45} &= 5278_2
\end{aligned}$$

Block 11:	φ_{16}	φ_{17}	φ_{50}	φ_{51}
$728_1 = \chi_{16}$	1	.	.	.
$728_2 = \chi_{17}$	.	1	.	.
$6552_1 = \chi_{51}$	1	.	1	.
$6552_2 = \chi_{52}$	.	1	.	1
$11648_1 = \chi_{60}$	.	.	1	1

$$\begin{aligned}
\varphi_{16} &= 728_1 \\
\varphi_{17} &= 728_2 \\
\varphi_{50} &= 5824_1 \\
\varphi_{51} &= 5824_2
\end{aligned}$$

Block 47:	φ_{68}	φ_{76}	φ_{104}	φ_{109}
$14_1 = \chi_{75}$	1	.	.	.
$546_4 = \chi_{84}$	1	1	.	.
$4914_2 = \chi_{111}$	.	1	1	.
$5824_6 = \chi_{117}$	.	.	.	1
$10206_2 = \chi_{126}$	.	.	1	1

$$\begin{aligned}
\varphi_{68} &= 14_1 \\
\varphi_{76} &= 532_1 \\
\varphi_{104} &= 4382_2 \\
\varphi_{109} &= 5824_4
\end{aligned}$$

Block 48:	φ_{69}	φ_{77}	φ_{103}	φ_{108}
$14_2 = \chi_{76}$	1	.	.	.
$546_3 = \chi_{83}$	1	1	.	.
$4914_1 = \chi_{110}$	.	1	1	.
$5824_5 = \chi_{116}$	.	.	.	1
$10206_1 = \chi_{125}$	.	.	1	1

$$\begin{aligned}
\varphi_{69} &= 14_2 \\
\varphi_{77} &= 532_2 \\
\varphi_{103} &= 4382_1 \\
\varphi_{108} &= 5824_3
\end{aligned}$$

Block 49:	φ_{70}	φ_{80}	φ_{100}	φ_{119}
$182_1 = \chi_{77}$	1	.	.	.
$1092_1 = \chi_{87}$	.	1	.	.
$4368_1 = \chi_{107}$	1	.	1	.
$11648_4 = \chi_{129}$	.	1	.	1
$14742_1 = \chi_{133}$	.	.	1	1

$$\begin{aligned}\varphi_{70} &= 182_1 \\ \varphi_{80} &= 1092_1 \\ \varphi_{100} &= 4186_1 \\ \varphi_{119} &= 10556_1\end{aligned}$$

Block 50:	φ_{71}	φ_{84}	φ_{101}	φ_{121}
$182_2 = \chi_{78}$	1	.	.	.
$1092_5 = \chi_{91}$	.	1	.	.
$4368_3 = \chi_{109}$	1	.	1	.
$11648_6 = \chi_{131}$	.	1	.	1
$14742_3 = \chi_{135}$	.	.	1	1

$$\begin{aligned}\varphi_{71} &= 182_2 \\ \varphi_{84} &= 1092_5 \\ \varphi_{101} &= 4186_2 \\ \varphi_{121} &= 10556_3\end{aligned}$$

Block 51:	φ_{72}	φ_{83}	φ_{102}	φ_{120}
$182_3 = \chi_{79}$	1	.	.	.
$1092_4 = \chi_{90}$	.	1	.	.
$4368_2 = \chi_{108}$	1	.	1	.
$11648_5 = \chi_{130}$	.	1	.	1
$14742_2 = \chi_{134}$	.	.	1	1

$$\begin{aligned}\varphi_{72} &= 182_3 \\ \varphi_{83} &= 1092_4 \\ \varphi_{102} &= 4186_3 \\ \varphi_{120} &= 10556_2\end{aligned}$$

Block 52:	φ_{73}	φ_{74}	φ_{95}	φ_{96}
$364_1 = \chi_{80}$	1	.	.	.
$364_2 = \chi_{81}$	.	1	.	.
$3276_1 = \chi_{103}$	1	.	1	.
$3276_2 = \chi_{104}$	.	1	.	1
$5824_4 = \chi_{115}$	.	.	1	1

$$\begin{aligned}\varphi_{73} &= 364_1 \\ \varphi_{74} &= 364_2 \\ \varphi_{95} &= 2912_1 \\ \varphi_{96} &= 2912_2\end{aligned}$$

Block 56:	φ_{81}	φ_{82}	φ_{115}	φ_{116}
$1092_2 = \chi_{88}$	1	.	.	.
$1092_3 = \chi_{89}$	.	1	.	.
$9828_1 = \chi_{123}$	1	.	1	.
$9828_2 = \chi_{124}$	.	1	.	1
$17472_2 = \chi_{138}$	.	.	1	1

$$\begin{aligned}\varphi_{81} &= 1092_2 \\ \varphi_{82} &= 1092_3 \\ \varphi_{115} &= 8736_1 \\ \varphi_{116} &= 8736_2\end{aligned}$$