

$S_{12} \pmod{3}$

	blocks	defect	matrix
$G :$	1	5	51×20
	2	2	9×5
	3	2	9×5
	4	1	3×2
	5	1	3×2

	blocks	defect	matrix
	6	0	$2673_1 = \chi_{32,0}, \varphi_{20,0}$
	7	0	$2673_2 = \chi_{32,1}, \varphi_{20,1}$
$2.G :$	8	5	21×5
	9	0	$7776_1 = \chi_{65,0}, \varphi_{32,0}$
	10	0	$7776_2 = \chi_{65,1}, \varphi_{32,1}$

Block 1:	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{2,0}$	$\varphi_{2,1}$	$\varphi_{3,0}$	$\varphi_{3,1}$	$\varphi_{5,0}$	$\varphi_{5,1}$	φ_{6+}	$\varphi_{8,0}$	$\varphi_{8,1}$	$\varphi_{9,0}$	$\varphi_{9,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.	.	.	.
$1_2 = \chi_{1,1}$	.	1	.	.	.	.	.	.	.	.	.	.	.
$11_1 = \chi_{2,0}$	1	.	1	.	.	.	.	.	.	.	.	.	.
$11_2 = \chi_{2,1}$	.	1	.	1	.	.	.	.	.	.	.	.	.
$55_1 = \chi_{4,0}$	.	.	1	.	1	.	.	.	.	.	.	.	.
$55_2 = \chi_{4,1}$	.	.	.	1	.	1	.	.	.	.	.	.	.
$132_1 = \chi_{5,0}$	.	1	.	.	.	.	.	.	.	1	.	.	.
$132_2 = \chi_{5,1}$	1	.	.	.	.	.	.	.	.	.	1	.	.
$154_1 = \chi_{6,0}$	1	.	1	.	.	.	.	.	.	.	.	1	.
$154_2 = \chi_{6,1}$	.	1	.	1	.	.	.	.	.	.	.	.	1
$165_1 = \chi_{7,0}$	.	.	.	.	1	.	1	.	.	.	.	.	.
$165_2 = \chi_{7,1}$	.	.	.	.	.	1	.	1	.	.	.	.	.
$275_1 = \chi_{8,0}$	1	.	.	.	.	.	.	.	.	1	.	1	.
$275_2 = \chi_{8,1}$	.	1	.	.	.	.	.	.	.	.	1	.	1
$320_1 = \chi_{10,0}$	2	.	1	.	1	.	1	.	.	.	.	1	.
$320_2 = \chi_{10,1}$	.	2	.	1	.	1	.	1	.	.	.	.	1
$330_1 = \chi_{11,0}$	.	.	.	.	.	.	1	.	.	.	.	.	.
$330_2 = \chi_{11,1}$	.	.	.	.	.	.	.	1	.	.	.	.	.
$462_1 = \chi_{12,0}$	.	.	.	.	.	.	.	.	1	.	.	.	.
$462_2 = \chi_{12,1}$	.	.	.	.	.	.	.	.	1	.	.	.	.
$462_3 = \chi_{13,0}$	.	1	.	.	.	.	.	1	.	1	.	.	.
$462_4 = \chi_{13,1}$	1	.	.	.	.	.	1	.	.	.	1	.	.
$616_1 = \chi_{14,0}$	2	.	1	.	.	.	1	.	.	1	.	1	.
$616_2 = \chi_{14,1}$	.	2	.	1	.	.	.	1	.	.	1	.	1
$2100_1 = \chi_{17+}$	.	.	.	.	.	.	.	.	1	.	.	.	.
$1155_1 = \chi_{19,0}$	.	1	.	1	.	.	.	.	.	1	.	.	.
$1155_2 = \chi_{19,1}$	1	.	1	.	.	.	.	.	.	.	1	.	.
$1320_1 = \chi_{20,0}$	.	.	.	1	.	1	.	.	1	.	.	.	.
$1320_2 = \chi_{20,1}$	.	.	1	.	1	.	.	.	1	.	.	.	.
$2640_1 = \chi_{21+}$	2	2	.	.	.	.	1	1	.	1	1	1	1
$1408_1 = \chi_{23,0}$	1	.	.	.	.	.	1	.	.	1	.	1	.
$1408_2 = \chi_{23,1}$	.	1	.	.	.	.	.	1	.	.	1	.	1
$1650_1 = \chi_{25,0}$	.	.	.	1	1	.	1	.	1	.	.	.	.
$1650_2 = \chi_{25,1}$	.	.	1	.	.	1	.	1	1	.	.	.	.
$1925_1 = \chi_{27,0}$	1	.	1	.	1	.	1	.	1	1	.	1	.
$1925_2 = \chi_{27,1}$	.	1	.	1	.	1	.	1	1	.	1	.	1
$1925_3 = \chi_{28,0}$	2	1	1	.	.	.	.	.	.	1	.	1	.
$1925_4 = \chi_{28,1}$	1	2	.	1	.	.	.	.	.	.	1	.	1
$2112_1 = \chi_{30,0}$	.	1	.	1	.	1	1	1	1	1	.	.	.
$2112_2 = \chi_{30,1}$	1	.	1	.	1	.	1	1	1	.	1	.	.

(Block 1:)	$\varphi_{10,0}$	$\varphi_{10,1}$	φ_{12+}	$\varphi_{16,0}$	$\varphi_{16,1}$	$\varphi_{19,0}$	$\varphi_{19,1}$
$1_1 = \chi_{1,0}$	.	.	.	.	.	.	.
$1_2 = \chi_{1,1}$	.	.	.	.	.	.	.
$11_1 = \chi_{2,0}$	.	.	.	.	.	.	.
$11_2 = \chi_{2,1}$	.	.	.	.	.	.	.
$55_1 = \chi_{4,0}$	.	.	.	.	.	.	.
$55_2 = \chi_{4,1}$	.	.	.	.	.	.	.
$132_1 = \chi_{5,0}$	.	.	.	.	.	.	.
$132_2 = \chi_{5,1}$	.	.	.	.	.	.	.
$154_1 = \chi_{6,0}$	.	.	.	.	.	.	.
$154_2 = \chi_{6,1}$	.	.	.	.	.	.	.
$165_1 = \chi_{7,0}$	.	.	.	.	.	.	.
$165_2 = \chi_{7,1}$	.	.	.	.	.	.	.
$275_1 = \chi_{8,0}$	.	.	.	.	.	.	.
$275_2 = \chi_{8,1}$	.	.	.	.	.	.	.
$320_1 = \chi_{10,0}$	.	.	.	.	.	.	.
$320_2 = \chi_{10,1}$	.	.	.	.	.	.	.
$330_1 = \chi_{11,0}$	1	.	.	.	.	.	.
$330_2 = \chi_{11,1}$	.	1	.	.	.	.	.
$462_1 = \chi_{12,0}$	1	.	.	.	.	.	.
$462_2 = \chi_{12,1}$	.	1	.	.	.	.	.
$462_3 = \chi_{13,0}$	1	.	.	.	.	.	.
$462_4 = \chi_{13,1}$	.	1	.	.	.	.	.
$616_1 = \chi_{14,0}$	1	.	.	.	.	.	.
$616_2 = \chi_{14,1}$	.	1	.	.	.	.	.
$2100_1 = \chi_{17+}$	1	1	1	.	.	.	.
$1155_1 = \chi_{19,0}$	.	.	.	1	.	.	.
$1155_2 = \chi_{19,1}$	.	.	.	.	1	.	.
$1320_1 = \chi_{20,0}$	.	.	.	1	.	.	.
$1320_2 = \chi_{20,1}$	.	.	.	.	1	.	.
$2640_1 = \chi_{21+}$	1	1	1	.	.	.	.
$1408_1 = \chi_{23,0}$	.	.	.	1	.	.	.
$1408_2 = \chi_{23,1}$	.	.	.	.	1	.	.
$1650_1 = \chi_{25,0}$	.	1	.	1	.	.	.
$1650_2 = \chi_{25,1}$	1	.	.	.	1	.	.
$1925_1 = \chi_{27,0}$	1	.	.	1	.	.	.
$1925_2 = \chi_{27,1}$	.	1	.	.	1	.	.
$1925_3 = \chi_{28,0}$	1	.	1	.	.	.	.
$1925_4 = \chi_{28,1}$	.	1	1	.	.	.	.
$2112_1 = \chi_{30,0}$	1	1	.	1	.	.	.
$2112_2 = \chi_{30,1}$	1	1	.	.	1	.	.

(Block 1:)	$\varphi_{1,0}$	$\varphi_{1,1}$	$\varphi_{2,0}$	$\varphi_{2,1}$	$\varphi_{3,0}$	$\varphi_{3,1}$	$\varphi_{5,0}$	$\varphi_{5,1}$	φ_{6+}	$\varphi_{8,0}$	$\varphi_{8,1}$	$\varphi_{9,0}$	$\varphi_{9,1}$
$3080_1 = \chi_{34,0}$	1	.	.	1	.	.	1	.	.	.	.	.	.
$3080_2 = \chi_{34,1}$	.	1	1	.	.	.	.	1	.	.	.	.	.
$3520_1 = \chi_{35,0}$	1	2	.	1	.	.	.	.	.	.	.	.	1
$3520_2 = \chi_{35,1}$	2	1	1	.	.	.	.	.	.	.	.	1	.
$3696_1 = \chi_{37,0}$	2	.	.	.	.	.	1	.	.	.	.	.	.
$3696_2 = \chi_{37,1}$	.	2	.	.	.	.	.	1	.	.	.	.	.
$7700_1 = \chi_{38+}$	3	3	1	1	.	.	1	1	.	.	.	1	1
$5632_1 = \chi_{42,0}$	3	1	1	1	1	.	2	.	1	1	.	1	.
$5632_2 = \chi_{42,1}$	1	3	1	1	.	1	.	2	1	.	1	.	1
$5775_1 = \chi_{43,0}$	2	2	.	2	.	1	1	1	1	1	.	1	1
$5775_2 = \chi_{43,1}$	2	2	2	.	1	.	1	1	1	.	1	1	1

(Block 1:)	$\varphi_{10,0}$	$\varphi_{10,1}$	φ_{12+}	$\varphi_{16,0}$	$\varphi_{16,1}$	$\varphi_{19,0}$	$\varphi_{19,1}$
$3080_1 = \chi_{34,0}$	.	.	.	1	.	1	.
$3080_2 = \chi_{34,1}$	.	.	.	.	1	.	1
$3520_1 = \chi_{35,0}$	.	.	1	.	.	1	.
$3520_2 = \chi_{35,1}$	.	.	1	.	.	.	1
$3696_1 = \chi_{37,0}$	1	.	1	.	.	1	.
$3696_2 = \chi_{37,1}$	.	1	1	.	.	.	1
$7700_1 = \chi_{38+}$	1	1	2	.	.	1	1
$5632_1 = \chi_{42,0}$	1	1	1	1	.	1	.
$5632_2 = \chi_{42,1}$	1	1	1	.	1	.	1
$5775_1 = \chi_{43,0}$	1	1	1	1	.	1	.
$5775_2 = \chi_{43,1}$	1	1	1	.	1	.	1

$\varphi_{1,0}$	=	1_1
$\varphi_{1,1}$	=	1_2
$\varphi_{2,0}$	=	10_1
$\varphi_{2,1}$	=	10_2
$\varphi_{3,0}$	=	45_1
$\varphi_{3,1}$	=	45_2
$\varphi_{5,0}$	=	120_1
$\varphi_{5,1}$	=	120_2
φ_{6+}	=	252_1
$\varphi_{8,0}$	=	131_1
$\varphi_{8,1}$	=	131_2
$\varphi_{9,0}$	=	143_1
$\varphi_{9,1}$	=	143_2
$\varphi_{10,0}$	=	210_1
$\varphi_{10,1}$	=	210_2
φ_{12+}	=	1428_1
$\varphi_{16,0}$	=	1013_1
$\varphi_{16,1}$	=	1013_2
$\varphi_{19,0}$	=	1936_1
$\varphi_{19,1}$	=	1936_2

Block 2:	$\varphi_{4,0}$	$\varphi_{11,0}$	$\varphi_{15,1}$	$\varphi_{17,1}$	$\varphi_{18,0}$	
$54_1 = \chi_{3,0}$	1	.	.	.	.	
$297_1 = \chi_{9,0}$	.	1	.	.	.	$\varphi_{4,0} = 54_1$
$945_2 = \chi_{16,1}$	.	.	1	.	.	$\varphi_{11,0} = 297_1$
$1485_2 = \chi_{24,1}$	1	.	.	1	.	$\varphi_{15,1} = 945_2$
$1728_1 = \chi_{26,0}$	.	.	.	.	1	$\varphi_{17,1} = 1431_2$
$2079_1 = \chi_{29,0}$	1	1	.	.	1	$\varphi_{18,0} = 1728_1$
$2376_2 = \chi_{31,1}$	.	.	1	1	.	
$2970_1 = \chi_{33,0}$	.	1	1	.	1	
$4158_2 = \chi_{40,1}$	1	.	1	1	1	

Block 3:	$\varphi_{4,1}$	$\varphi_{11,1}$	$\varphi_{15,0}$	$\varphi_{17,0}$	$\varphi_{18,1}$	
$54_2 = \chi_{3,1}$	1	.	.	.	.	
$297_2 = \chi_{9,1}$	.	1	.	.	.	$\varphi_{4,1} = 54_2$
$945_1 = \chi_{16,0}$	.	.	1	.	.	$\varphi_{11,1} = 297_2$
$1485_1 = \chi_{24,0}$	1	.	.	1	.	$\varphi_{15,0} = 945_1$
$1728_2 = \chi_{26,1}$	.	.	.	.	1	$\varphi_{17,0} = 1431_1$
$2079_2 = \chi_{29,1}$	1	1	.	.	1	$\varphi_{18,1} = 1728_2$
$2376_1 = \chi_{31,0}$	.	.	1	1	.	
$2970_2 = \chi_{33,1}$	.	1	1	.	1	
$4158_1 = \chi_{40,0}$	1	.	1	1	1	

Block 4:	$\varphi_{14,0}$	$\varphi_{21,1}$	
$891_1 = \chi_{15,0}$	1	.	$\varphi_{14,0} = 891_1$
$3564_2 = \chi_{36,1}$	.	1	$\varphi_{21,1} = 3564_2$
$4455_1 = \chi_{41,0}$	1	1	

Block 5:	$\varphi_{14,1}$	$\varphi_{21,0}$	
$891_2 = \chi_{15,1}$	1	.	$\varphi_{14,1} = 891_2$
$3564_1 = \chi_{36,0}$	.	1	$\varphi_{21,0} = 3564_1$
$4455_2 = \chi_{41,1}$	1	1	

Block 8:	φ_{22+}	φ_{24+}	φ_{26+}	φ_{28+}	φ_{30+}	
$32_1 = \chi_{44,0}$	1	.	.	.	.	
$32_2 = \chi_{44,1}$	1	.	.	.	.	
$320_3 = \chi_{45+}$	1	1	.	.	.	
$1408_3 = \chi_{47+}$	1	1	.	1	.	
$2816_1 = \chi_{49+}$	.	.	1	2	.	
$1760_1 = \chi_{51,0}$	1	.	1	1	.	
$1760_2 = \chi_{51,1}$	1	.	1	1	.	
$3520_3 = \chi_{52+}$	2	.	2	2	.	$\varphi_{22+} = 32_1$
$3520_4 = \chi_{54+}$	2	.	2	2	.	$\varphi_{24+} = 288_1$
$1792_1 = \chi_{56,0}$	2	.	1	1	.	$\varphi_{26+} = 640_1$
$1792_2 = \chi_{56,1}$	2	.	1	1	.	$\varphi_{28+} = 1088_1$
$4224_1 = \chi_{57+}$	2	.	2	.	1	$\varphi_{30+} = 2880_1$
$5280_1 = \chi_{59+}$	1	.	2	1	1	
$3840_1 = \chi_{61,0}$	1	1	1	.	1	
$3840_2 = \chi_{61,1}$	1	1	1	.	1	
$5600_1 = \chi_{62,0}$	2	1	2	1	1	
$5600_2 = \chi_{62,1}$	2	1	2	1	1	
$5632_3 = \chi_{63,0}$	3	1	2	1	1	
$5632_4 = \chi_{63,1}$	3	1	2	1	1	
$7392_1 = \chi_{64,0}$	4	1	3	2	1	
$7392_2 = \chi_{64,1}$	4	1	3	2	1	