

$$F_4(2) \pmod{3}$$

	blocks	defect	matrix
$G :$	1	6	61×26
	2	2	9×5
	3	0	$142884_1 = \chi_{16}, \varphi_{41}$
	$4 = \bar{3}$	0	$142884_2 = \chi_{17}, \varphi_{42}$
	5	0	$322218_1 = \chi_{27}, \varphi_{43}$
	6	2	9×5
	7	0	$947700_1 = \chi_{44}, \varphi_{44}$
	8	1	3×2
	9	1	3×2
	10	0	$7894341_1 = \chi_{77}, \varphi_{45}$
	11	0	$8055450_1 = \chi_{78}, \varphi_{46}$
	12	0	$8055450_2 = \chi_{79}, \varphi_{47}$
	13	0	$11609325_1 = \chi_{86}, \varphi_{48}$
	14	0	$11609325_2 = \chi_{87}, \varphi_{49}$
	15	0	$15181425_1 = \chi_{93}, \varphi_{50}$
$2.G :$	16	6	46×17
	17	2	9×5
	18	2	9×5
	19	1	3×2
	20	1	3×2
	21	0	$3572100_1 = \chi_{134}, \varphi_{82}$
	22	0	$3572100_2 = \chi_{135}, \varphi_{83}$
	23	0	$7429968_1 = \chi_{154}, \varphi_{84}$
	24	0	$15163200_1 = \chi_{167}, \varphi_{85}$
	25	0	$15163200_2 = \chi_{168}, \varphi_{86}$

Block 1:	φ_1	φ_2	φ_3	φ_4	φ_5	φ_6	φ_7	φ_8	φ_9	φ_{10}	φ_{11}	φ_{12}	φ_{13}	φ_{14}
$1_1 = \chi_1$	1	.	.	.	.	.	.	.	.	.	.	.	.	.
$833_1 = \chi_2$	.	1	.	.	.	.	.	.	.	.	.	.	.	.
$1105_1 = \chi_3$	.	.	1	.	.	.	.	.	.	.	.	.	.	.
$1105_2 = \chi_4$	.	.	.	1	.	.	.	.	.	.	.	.	.	.
$1326_1 = \chi_5$	.	.	.	.	1	.	.	.	.	.	.	.	.	.
$21658_1 = \chi_7$	.	.	.	.	.	1	.	.	.	.	.	.	.	.
$22932_1 = \chi_8$	.	.	1	1	.	.	1	.	.	.	.	.	.	.
$23205_1 = \chi_9$	.	1	.	.	.	.	.	1	.	.	.	.	.	.
$23205_2 = \chi_{10}$	.	1	.	.	.	.	.	.	1	.	.	.	.	.
$44200_1 = \chi_{11}$	1	.	1	.	.	.	1	1	.	.	.	.	.	.
$44200_2 = \chi_{12}$	1	.	.	1	.	.	1	.	1	.	.	.	.	.
$63700_1 = \chi_{13}$	.	.	.	.	.	.	.	.	.	1	.	.	.	.
$99450_1 = \chi_{14}$	1	.	.	.	.	.	.	1	.	.	1	.	.	.
$99450_2 = \chi_{15}$	1	.	.	.	.	.	.	.	1	.	.	1	.	.
$162435_1 = \chi_{18}$	.	.	.	.	.	1	.	.	.	1	1	.	.	.
$162435_2 = \chi_{19}$	.	.	.	.	.	1	.	.	.	1	.	1	.	.
$183600_1 = \chi_{20}$	.	.	.	.	.	.	.	.	.	.	.	.	1	.
$183600_2 = \chi_{21}$	.	.	.	.	.	.	.	.	.	.	.	.	1	.
$216580_1 = \chi_{22}$	.	1	.	.	.	.	.	.	.	.	.	.	.	1
$216580_2 = \chi_{23}$	.	1	.	.	.	.	.	.	.	.	.	.	.	.
$249900_1 = \chi_{24}$	1	1	.	.	1	.	1	1	1	.	.	.	.	.
$270725_1 = \chi_{26}$	.	.	.	.	.	.	.	.	.	.	.	.	.	.
$348075_1 = \chi_{28}$	.	.	.	.	2	.	.	1	.	1	1	.	.	.
$348075_2 = \chi_{29}$	.	.	.	.	2	.	.	.	1	1	.	1	.	.
$519792_1 = \chi_{32}$	1	.	.	.	.	.	1	1	1	.	.	.	1	.
$541450_1 = \chi_{33}$	.	.	1	1	.	.	1	1	.	.	.	.	.	.
$541450_2 = \chi_{34}$	.	.	1	1	.	.	1	.	1	.	.	.	.	.
$541450_3 = \chi_{35}$	.	.	.	.	1	.	.	.	.	1	1	.	1	1
$541450_4 = \chi_{36}$	.	.	.	.	1	.	.	.	.	1	.	1	1	.
$584766_1 = \chi_{37}$	2	1	.	.	.	.	2	2	2	.	.	.	.	.
$812175_1 = \chi_{40}$	.	1	.	.	.	.	.	1	.	.	1	.	.	1
$812175_2 = \chi_{41}$	.	1	.	.	.	.	.	.	1	.	.	1	.	.
$1082900_1 = \chi_{45}$	.	.	.	.	.	1	.	.	.	.	.	.	.	.
$1299480_1 = \chi_{46}$	.	.	.	.	1	.	.	.	.	1	1	.	.	.
$1299480_2 = \chi_{47}$	.	.	.	.	1	.	.	.	.	1	.	1	.	.
$1949220_1 = \chi_{50}$	.	.	.	.	.	.	.	1	.	.	.	.	.	.
$1949220_2 = \chi_{51}$	.	.	.	.	.	.	.	.	1	.	.	.	.	.
$2165800_1 = \chi_{52}$	.	.	.	.	.	.	.	.	.	1	.	.	2	1
$2165800_2 = \chi_{53}$	.	.	.	.	.	.	.	.	.	1	.	.	2	.
$2784600_1 = \chi_{54}$	.	1	.	.	.	.	.	1	.	1	1	.	2	1

[illegible]

(Block 1:)	φ_1	φ_2	φ_3	φ_4	φ_5	φ_6	φ_7	φ_8	φ_9	φ_{10}	φ_{11}	φ_{12}	φ_{13}	φ_{14}
$2784600_2 = \chi_{55}$	.	1	.	.	.	.	.	.	1	1	.	1	2	1
$2828800_1 = \chi_{56}$	1	1	.	1	1	.	1	2	1	1	1	.	1	1
$2828800_2 = \chi_{57}$	1	1	1	.	1	.	1	1	2	1	.	1	1	.
$3411968_1 = \chi_{58}$	.	1	.	.	.	.	.	.	.	.	.	.	2	1
$3898440_1 = \chi_{59}$	.	1	.	.	.	.	.	1	.	.	.	.	2	1
$3898440_2 = \chi_{60}$	.	1	.	.	.	.	.	.	1	.	.	.	2	1
$4331600_1 = \chi_{61}$	.	.	.	.	.	1	.	.	.	1	1	.	1	1
$4331600_2 = \chi_{62}$	.	.	.	.	.	1	.	.	.	1	.	1	1	.
$4526080_1 = \chi_{67}$	.	.	.	1	.	1	.	.	.	1	1	.	1	1
$4526080_2 = \chi_{68}$	.	.	1	.	.	1	.	.	.	1	.	1	1	.
$5870592_1 = \chi_{72}$	.	1	1	1	.	.	1	1	1	.	.	.	2	1
$6497400_1 = \chi_{73}$	.	.	.	.	1	1	.	1	.	2	1	.	2	1
$6497400_2 = \chi_{74}$	.	.	.	.	1	1	.	.	1	2	.	1	2	.
$7309575_1 = \chi_{75}$	.	.	.	.	.	2	.	.	.	2	1	.	3	2
$7309575_2 = \chi_{76}$	.	.	.	.	.	2	.	.	.	2	.	1	3	.
$11880960_1 = \chi_{88}$	.	.	.	.	1	.	.	.	1	2	.	.	2	.
$11880960_2 = \chi_{89}$	.	.	.	.	1	.	.	1	.	2	.	.	2	.
$14619150_1 = \chi_{91}$	.	.	.	.	1	.	.	.	.	2	1	.	3	2
$14619150_2 = \chi_{92}$	.	.	.	.	1	.	.	.	.	2	.	1	3	.
$16777216_1 = \chi_{94}$	1	1	.	.	2	1	.	1	1	4	1	1	4	1
$17326400_1 = \chi_{95}$	.	.	.	.	.	1	.	.	.	2	.	.	4	1

(Block 1:)	φ_{15}	φ_{16}	φ_{17}	φ_{18}	φ_{19}	φ_{20}	φ_{21}	φ_{22}	φ_{23}	φ_{24}	φ_{25}	φ_{26}
$2784600_2 = \chi_{55}$	1	.	1	.	.	.	.	.	.	.	1	.
$2828800_1 = \chi_{56}$	.	1	1	1	.	.	.	.	1	.	.	.
$2828800_2 = \chi_{57}$	1	1	1	.	1	.	.	.	.	1	.	.
$3411968_1 = \chi_{58}$	1	.	.	.	.	1	.	.	.	.	1	.
$3898440_1 = \chi_{59}$	1	.	1	1	.	1	.	.	1	.	.	.
$3898440_2 = \chi_{60}$	1	.	1	.	1	1	.	.	.	1	.	.
$4331600_1 = \chi_{61}$	.	.	.	.	.	1	1	.	.	.	1	.
$4331600_2 = \chi_{62}$	1	.	.	.	.	1	.	1	.	.	1	.
$4526080_1 = \chi_{67}$	.	.	.	1	.	1	1	.	1	.	.	.
$4526080_2 = \chi_{68}$	1	.	.	.	1	1	.	1	.	1	.	.
$5870592_1 = \chi_{72}$	1	1	1	1	1	1	.	.	1	1	.	.
$6497400_1 = \chi_{73}$	.	1	1	1	.	1	1	.	1	1	.	.
$6497400_2 = \chi_{74}$	1	1	1	.	1	1	.	1	1	1	.	.
$7309575_1 = \chi_{75}$	.	.	.	.	.	2	.	1	1	.	1	.
$7309575_2 = \chi_{76}$	2	.	.	.	.	2	1	.	.	1	1	.
$11880960_1 = \chi_{88}$	.	1	1	.	.	1	1	.	1	1	.	1
$11880960_2 = \chi_{89}$	.	1	1	.	.	1	.	1	1	1	.	1
$14619150_1 = \chi_{91}$	.	.	.	.	.	2	2	.	1	.	1	1
$14619150_2 = \chi_{92}$	2	.	.	.	.	2	.	2	.	1	1	1
$16777216_1 = \chi_{94}$	1	1	1	.	.	2	1	1	1	1	1	1
$17326400_1 = \chi_{95}$	1	.	1	.	.	3	1	1	1	1	1	1

$\varphi_1 = 1_1$	$\varphi_{14} = 215747_1$
$\varphi_2 = 833_1$	$\varphi_{15} = 215747_2$
$\varphi_3 = 1105_1$	$\varphi_{16} = 182274_1$
$\varphi_4 = 1105_2$	$\varphi_{17} = 270725_1$
$\varphi_5 = 1326_1$	$\varphi_{18} = 496146_1$
$\varphi_6 = 21658_1$	$\varphi_{19} = 496146_2$
$\varphi_7 = 20722_1$	$\varphi_{20} = 1061242_1$
$\varphi_8 = 22372_1$	$\varphi_{21} = 1157377_1$
$\varphi_9 = 22372_2$	$\varphi_{22} = 1157377_2$
$\varphi_{10} = 63700_1$	$\varphi_{23} = 1248428_1$
$\varphi_{11} = 77077_1$	$\varphi_{24} = 1248428_2$
$\varphi_{12} = 77077_2$	$\varphi_{25} = 1551199_1$
$\varphi_{13} = 183600_1$	$\varphi_{26} = 6194188_1$

Block 2:	φ_{27}	φ_{28}	φ_{29}	φ_{30}	φ_{31}	
$1377_1 = \chi_6$	1	.	.	.	.	
$269892_1 = \chi_{25}$	.	1	.	.	.	$\varphi_{27} = 1377_1$
$358020_1 = \chi_{30}$	1	.	1	.	.	$\varphi_{28} = 269892_1$
$358020_2 = \chi_{31}$	1	.	.	1	.	$\varphi_{29} = 356643_1$
$626535_1 = \chi_{38}$	.	1	1	.	.	$\varphi_{30} = 356643_2$
$626535_2 = \chi_{39}$	.	1	.	1	.	$\varphi_{31} = 4655637_1$
$5012280_1 = \chi_{69}$	.	.	1	.	1	
$5012280_2 = \chi_{70}$	.	.	.	1	1	
$5640192_1 = \chi_{71}$	1	1	1	1	1	

Block 6:	φ_{32}	φ_{33}	φ_{34}	φ_{35}	φ_{36}	
$877149_1 = \chi_{42}$	1	.	.	.	.	
$877149_2 = \chi_{43}$	.	1	.	.	.	$\varphi_{32} = 877149_1$
$4385745_1 = \chi_{63}$	1	.	1	.	.	$\varphi_{33} = 877149_2$
$4385745_2 = \chi_{64}$	1	.	.	1	.	$\varphi_{34} = 3508596_1$
$4385745_3 = \chi_{65}$	.	1	1	.	.	$\varphi_{35} = 3508596_2$
$4385745_4 = \chi_{66}$	.	1	.	1	.	$\varphi_{36} = 5262894_1$
$8771490_1 = \chi_{80}$	.	.	1	.	1	
$8771490_2 = \chi_{81}$	.	.	.	1	1	
$14034384_1 = \chi_{90}$	1	1	1	1	1	

Block 8:	φ_{37}	φ_{38}	
$1342575_1 = \chi_{48}$	1	.	$\varphi_{37} = 1342575_1$
$9398025_1 = \chi_{82}$	.	1	$\varphi_{38} = 9398025_1$
$10740600_1 = \chi_{84}$	1	1	

Block 9:	φ_{39}	φ_{40}	
$1342575_2 = \chi_{49}$	1	.	$\varphi_{39} = 1342575_2$
$9398025_2 = \chi_{83}$	.	1	$\varphi_{40} = 9398025_2$
$10740600_2 = \chi_{85}$	1	1	

[illegible]

(Block 16:)	φ_{64}	φ_{65}	φ_{66}	φ_{67}
$52_1 = \chi_{96}$	.	.	.	.
$2380_1 = \chi_{97}$	.	.	.	.
$2380_2 = \chi_{98}$	.	.	.	.
$12376_1 = \chi_{99}$	.	.	.	.
$12376_2 = \chi_{100}$	.	.	.	.
$22100_1 = \chi_{101}$	.	.	.	.
$43316_1 = \chi_{102}$	.	.	.	.
$46800_1 = \chi_{103}$	.	.	.	.
$424320_1 = \chi_{106}$	.	.	.	.
$424320_2 = \chi_{107}$	.	.	.	.
$433160_1 = \chi_{108}$	.	.	.	.
$433160_2 = \chi_{109}$	.	.	.	.
$565760_1 = \chi_{110}$	.	.	.	.
$1082900_2 = \chi_{115}$	.	.	.	.
$1082900_3 = \chi_{116}$	.	.	.	.
$1082900_4 = \chi_{117}$	.	.	.	.
$1146600_1 = \chi_{118}$	.	.	.	.
$1299480_3 = \chi_{121}$	.	.	.	.
$1299480_4 = \chi_{122}$	.	.	.	.
$1591200_1 = \chi_{125}$	.	.	.	.
$1591200_2 = \chi_{126}$	.	.	.	.
$1949220_3 = \chi_{127}$	.	1	.	.
$1949220_4 = \chi_{128}$	1	.	.	.
$2165800_3 = \chi_{129}$	.	.	1	.
$2772224_1 = \chi_{130}$	.	.	.	.
$2772224_2 = \chi_{131}$	.	.	.	.
$2784600_3 = \chi_{132}$	.	.	.	.
$2784600_4 = \chi_{133}$	.	.	.	.
$4798080_1 = \chi_{136}$	.	1	1	.
$4798080_2 = \chi_{137}$	1	.	1	.
$4950400_1 = \chi_{138}$	.	.	1	.
$4950400_2 = \chi_{139}$	.	.	1	.
$6497400_3 = \chi_{146}$	.	1	.	1
$6497400_4 = \chi_{147}$	1	.	.	1
$6930560_1 = \chi_{150}$	.	1	1	.
$6930560_2 = \chi_{151}$	1	.	1	.
$8663200_1 = \chi_{155}$	.	1	1	1
$8663200_2 = \chi_{156}$	1	.	1	1
$9052160_1 = \chi_{157}$	1	1	1	1
$9547200_1 = \chi_{158}$	1	1	.	2

(Block 16:)	φ_{51}	φ_{52}	φ_{53}	φ_{54}	φ_{55}	φ_{56}	φ_{57}	φ_{58}	φ_{59}	φ_{60}	φ_{61}	φ_{62}	φ_{63}
$12475008_1 = \chi_{163}$	.	1	1	.	1	1	1	.	2	3	.	1	1
$12475008_2 = \chi_{164}$	.	1	1	.	1	1	.	1	2	3	.	1	1
$13861120_1 = \chi_{165}$	1	1	.	.	3	1	1	.	1	2	1	1	.
$13861120_2 = \chi_{166}$	1	.	1	.	3	1	.	1	1	2	1	.	1
$16307200_1 = \chi_{169}$	.	1	1	.	.	.	.	.	3	2	.	1	1
$16777216_2 = \chi_{170}$	2	2	2	1	4	2	1	1	3	2	2	1	1

(Block 16:)	φ_{64}	φ_{65}	φ_{66}	φ_{67}
$12475008_1 = \chi_{163}$	.	1	1	1
$12475008_2 = \chi_{164}$	1	.	1	1
$13861120_1 = \chi_{165}$	1	1	2	1
$13861120_2 = \chi_{166}$	1	1	2	1
$16307200_1 = \chi_{169}$	1	1	1	2
$16777216_2 = \chi_{170}$	1	1	2	1

φ_{51}	=	52_1
φ_{52}	=	2380_1
φ_{53}	=	2380_2
φ_{54}	=	9944_1
φ_{55}	=	22100_1
φ_{56}	=	43316_1
φ_{57}	=	387464_1
φ_{58}	=	387464_2
φ_{59}	=	551056_1
φ_{60}	=	1039584_1
φ_{61}	=	595544_1
φ_{62}	=	748424_1
φ_{63}	=	748424_2
φ_{64}	=	1561704_1
φ_{65}	=	1561704_2
φ_{66}	=	1526056_1
φ_{67}	=	3211896_1

Block 17:	φ_{68}	φ_{69}	φ_{70}	φ_{71}	φ_{72}
$55080_1 = \chi_{104}$	1	.	.	.	.
$572832_1 = \chi_{111}$	1	1	.	.	.
$716040_2 = \chi_{114}$	.	.	1	.	.
$1233792_2 = \chi_{120}$	.	1	1	.	.
$5012280_4 = \chi_{141}$	.	.	.	1	.
$5728320_2 = \chi_{145}$	.	.	.	.	1
$7017192_2 = \chi_{153}$	1	1	1	.	1
$10795680_2 = \chi_{160}$	1	.	.	1	1
$11456640_2 = \chi_{162}$	.	.	1	1	1

φ_{68}	=	55080_1
φ_{69}	=	517752_1
φ_{70}	=	716040_1
φ_{71}	=	5012280_1
φ_{72}	=	5728320_1

Block 18:	φ_{73}	φ_{74}	φ_{75}	φ_{76}	φ_{77}	
$55080_2 = \chi_{105}$	1	.	.	.	.	
$572832_2 = \chi_{112}$	1	1	.	.	.	$\varphi_{73} = 55080_2$
$716040_1 = \chi_{113}$	.	.	1	.	.	$\varphi_{74} = 517752_2$
$1233792_1 = \chi_{119}$	.	1	1	.	.	$\varphi_{75} = 716040_2$
$5012280_3 = \chi_{140}$	.	.	.	1	.	$\varphi_{76} = 5012280_2$
$5728320_1 = \chi_{144}$	.	.	.	.	1	$\varphi_{77} = 5728320_2$
$7017192_1 = \chi_{152}$	1	1	1	.	1	
$10795680_1 = \chi_{159}$	1	.	.	1	1	
$11456640_1 = \chi_{161}$	.	.	1	1	1	

Block 19:	φ_{78}	φ_{79}	
$1503684_1 = \chi_{123}$	1	.	$\varphi_{78} = 1503684_1$
$5370300_2 = \chi_{143}$	.	1	$\varphi_{79} = 5370300_1$
$6873984_2 = \chi_{149}$	1	1	

Block 20:	φ_{80}	φ_{81}	
$1503684_2 = \chi_{124}$	1	.	$\varphi_{80} = 1503684_2$
$5370300_1 = \chi_{142}$	.	1	$\varphi_{81} = 5370300_2$
$6873984_1 = \chi_{148}$	1	1	