

$$Ly \pmod{31}$$

	blocks	defect	matrix
$G :$	1	1	11×6
	2	0	$2480_1 = \chi_2, \varphi_2$
	$3 = \bar{2}$	0	$2480_2 = \chi_3, \varphi_3$
	4	0	$45694_1 = \chi_4, \varphi_4$
	5	0	$48174_1 = \chi_5, \varphi_5$
	$6 = \bar{5}$	0	$48174_2 = \chi_6, \varphi_6$
	7	0	$1152735_1 = \chi_{10}, \varphi_{10}$
	8	0	$1534500_1 = \chi_{11}, \varphi_{11}$
	9	0	$3028266_1 = \chi_{12}, \varphi_{12}$
	10	0	$3073960_1 = \chi_{13}, \varphi_{13}$
	11	0	$4226695_1 = \chi_{14}, \varphi_{14}$
	12	0	$5379430_1 = \chi_{16}, \varphi_{16}$
	13	0	$10758860_1 = \chi_{17}, \varphi_{17}$
	14	0	$11834746_1 = \chi_{18}, \varphi_{18}$
	15	0	$16906780_1 = \chi_{19}, \varphi_{19}$
	16	0	$18395586_1 = \chi_{20}, \varphi_{20}$
	17	0	$18395586_2 = \chi_{21}, \varphi_{21}$
	18	0	$18395586_3 = \chi_{22}, \varphi_{22}$
	19	0	$19212250_1 = \chi_{23}, \varphi_{23}$
	20	0	$21312500_1 = \chi_{24}, \varphi_{24}$
	21	0	$21312500_2 = \chi_{25}, \varphi_{25}$
	22	0	$22609664_1 = \chi_{26}, \varphi_{26}$
	23	0	$22609664_2 = \chi_{27}, \varphi_{27}$
	24	0	$22609664_3 = \chi_{28}, \varphi_{28}$
	25	0	$27252720_1 = \chi_{29}, \varphi_{29}$
	26	0	$27252720_2 = \chi_{30}, \varphi_{30}$
	27	0	$27252720_3 = \chi_{31}, \varphi_{31}$
	28	0	$27252720_4 = \chi_{32}, \varphi_{32}$
	29	0	$28787220_1 = \chi_{33}, \varphi_{33}$
	30	0	$29586865_1 = \chi_{34}, \varphi_{34}$
	31	0	$30739600_1 = \chi_{35}, \varphi_{35}$
	32	0	$33813560_1 = \chi_{36}, \varphi_{36}$
	33	0	$36887520_1 = \chi_{37}, \varphi_{37}$
	34	0	$44159500_1 = \chi_{44}, \varphi_{39}$
	35	0	$45648306_1 = \chi_{45}, \varphi_{40}$
	36	0	$45648306_2 = \chi_{46}, \varphi_{41}$
	37	0	$45694000_1 = \chi_{47}, \varphi_{42}$
	38	0	$45694000_2 = \chi_{48}, \varphi_{43}$
	39	0	$52994655_1 = \chi_{49}, \varphi_{44}$
	40	0	$53765625_1 = \chi_{50}, \varphi_{45}$

	blocks	defect	matrix
	41	0	$56022921_1 = \chi_{51}, \varphi_{46}$
	42	0	$64906250_1 = \chi_{52}, \varphi_{47}$
	43	0	$71008476_1 = \chi_{53}, \varphi_{48}$

Block 1:	φ_1	φ_7	φ_8	φ_9	φ_{15}	φ_{38}	
$1_1 = \chi_1$	1	.	.	.	.	.	$\varphi_1 = 1_1$
$120064_1 = \chi_7$	.	1	.	.	.	.	$\varphi_7 = 120064_1$
$120064_2 = \chi_8$	.	.	1	.	.	.	$\varphi_8 = 120064_2$
$381766_1 = \chi_9$	.	.	.	1	.	.	$\varphi_9 = 381766_1$
$4997664_1 = \chi_{15}$	1	.	.	.	1	.	$\varphi_{15} = 4997663_1$
$38734375_1 = \chi_{38}$	.	1	1	1	.	1	$\varphi_{38} = 38112481_1$
$43110144_1 = \chi_{39}$	.	.	.	.	1	1	
$43110144_2 = \chi_{40}$	.	.	.	.	1	1	
$43110144_3 = \chi_{41}$	.	.	.	.	1	1	
$43110144_4 = \chi_{42}$	.	.	.	.	1	1	
$43110144_5 = \chi_{43}$	.	.	.	.	1	1	