

## $HN.2 \pmod{11}$

	blocks	defect	matrix
$G :$	1	1	$11 \times 10$
	2	1	$11 \times 10$
	3	1	$7 \times 5$
	4	0	$3344_1 = \chi_{5,0}, \varphi_{5,0}$
	5	0	$3344_2 = \chi_{5,1}, \varphi_{5,1}$
	6	0	$17556_1 = \chi_{6+}, \varphi_{6+}$
	7	0	$8910_1 = \chi_{8,0}, \varphi_{8,0}$
	8	0	$8910_2 = \chi_{8,1}, \varphi_{8,1}$
	9	0	$9405_1 = \chi_{9,0}, \varphi_{9,0}$
	10	0	$9405_2 = \chi_{9,1}, \varphi_{9,1}$
	11	0	$16929_1 = \chi_{10,0}, \varphi_{10,0}$
	12	0	$16929_2 = \chi_{10,1}, \varphi_{10,1}$
	13	0	$70224_1 = \chi_{11+}, \varphi_{11+}$
	14	0	$131670_1 = \chi_{13+}, \varphi_{13+}$
	15	0	$214016_1 = \chi_{17,0}, \varphi_{17,0}$
	16	0	$214016_2 = \chi_{17,1}, \varphi_{17,1}$
	17	0	$267520_1 = \chi_{18,0}, \varphi_{18,0}$
	18	0	$267520_2 = \chi_{18,1}, \varphi_{18,1}$
	19	0	$270864_1 = \chi_{19,0}, \varphi_{19,0}$
	20	0	$270864_2 = \chi_{19,1}, \varphi_{19,1}$
	21	0	$365750_1 = \chi_{20,0}, \varphi_{20,0}$
	22	0	$365750_2 = \chi_{20,1}, \varphi_{20,1}$
	23	0	$749056_1 = \chi_{21+}, \varphi_{21+}$
	24	0	$406296_1 = \chi_{23,0}, \varphi_{23,0}$
	25	0	$406296_2 = \chi_{23,1}, \varphi_{23,1}$
	26	0	$653125_1 = \chi_{24,0}, \varphi_{27,0}$
	27	0	$653125_2 = \chi_{24,1}, \varphi_{27,1}$
	28	0	$1053360_1 = \chi_{29,0}, \varphi_{32,0}$
	29	0	$1053360_2 = \chi_{29,1}, \varphi_{32,1}$
	30	0	$2133054_1 = \chi_{30+}, \varphi_{33+}$
	31	0	$1185030_1 = \chi_{32,0}, \varphi_{36,0}$
	32	0	$1185030_2 = \chi_{32,1}, \varphi_{36,1}$
	33	0	$1354320_1 = \chi_{33,0}, \varphi_{38,0}$
	34	0	$1354320_2 = \chi_{33,1}, \varphi_{38,1}$
	35	0	$1625184_1 = \chi_{38,0}, \varphi_{41,0}$
	36	0	$1625184_2 = \chi_{38,1}, \varphi_{41,1}$
	37	0	$2031480_1 = \chi_{39,0}, \varphi_{42,0}$
	38	0	$2031480_2 = \chi_{39,1}, \varphi_{42,1}$
	39	0	$2407680_1 = \chi_{41,0}, \varphi_{43,0}$
	40	0	$2407680_2 = \chi_{41,1}, \varphi_{43,1}$

	blocks	defect	matrix
	41	0	$2661120_1 = \chi_{42,0}, \varphi_{45,0}$
	42	0	$2661120_2 = \chi_{42,1}, \varphi_{45,1}$
	43	0	$2784375_1 = \chi_{43,0}, \varphi_{46,0}$
	44	0	$2784375_2 = \chi_{43,1}, \varphi_{46,1}$
	45	0	$3424256_1 = \chi_{46,0}, \varphi_{47,0}$
	46	0	$3424256_2 = \chi_{46,1}, \varphi_{47,1}$
	47	0	$4561920_1 = \chi_{49,0}, \varphi_{50,0}$
	48	0	$4561920_2 = \chi_{49,1}, \varphi_{50,1}$
	49	0	$5332635_1 = \chi_{53,0}, \varphi_{51,0}$
	50	0	$5332635_2 = \chi_{53,1}, \varphi_{51,1}$
	51	0	$5878125_1 = \chi_{54,0}, \varphi_{52,0}$
	52	0	$5878125_2 = \chi_{54,1}, \varphi_{52,1}$

<b>Block 1:</b>	$\varphi_{1,0}$	$\varphi_{4,1}$	$\varphi_{26,0}$	$\varphi_{35,1}$	$\varphi_{37,1}$	$\varphi_{39,0}$	$\varphi_{40,1}$	$\varphi_{44,0}$	$\varphi_{48,0}$	$\varphi_{49,1}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.	.	.	.	.
$760_2 = \chi_{4,1}$	.	1	.	.	.	.	.	.	.	.
$1361920_1 = \chi_{34,0}$	1	.	.	.	.	1	.	.	.	.
$1575936_2 = \chi_{37,1}$	.	1	.	.	.	.	1	.	.	.
$2375000_2 = \chi_{40,1}$	.	.	.	1	1	.	.	.	.	.
$3200000_1 = \chi_{45,0}$	.	.	1	.	.	.	.	1	.	.
$3878280_2 = \chi_{47,1}$	.	.	.	.	1	.	.	1	.	.
$4156250_1 = \chi_{48,0}$	.	.	1	.	.	.	.	.	1	.
$4809375_2 = \chi_{50,1}$	.	.	.	1	.	.	.	.	.	1
$5103000_1 = \chi_{51,0}$	.	.	.	.	.	.	1	.	1	.
$5103000_3 = \chi_{52,0}$	.	.	.	.	.	1	.	.	.	1

$$\begin{aligned}
\varphi_{1,0} &= 1_1 & \varphi_{39,0} &= 1361919_1 \\
\varphi_{4,1} &= 760_2 & \varphi_{40,1} &= 1575176_2 \\
\varphi_{26,0} &= 628426_1 & \varphi_{44,0} &= 2571574_1 \\
\varphi_{35,1} &= 1068294_2 & \varphi_{48,0} &= 3527824_1 \\
\varphi_{37,1} &= 1306706_2 & \varphi_{49,1} &= 3741081_2
\end{aligned}$$

<b>Block 2:</b>	$\varphi_{1,1}$	$\varphi_{4,0}$	$\varphi_{26,1}$	$\varphi_{35,0}$	$\varphi_{37,0}$	$\varphi_{39,1}$	$\varphi_{40,0}$	$\varphi_{44,1}$	$\varphi_{48,1}$	$\varphi_{49,0}$
$1_2 = \chi_{1,1}$	1	.	.	.	.	.	.	.	.	.
$760_1 = \chi_{4,0}$	.	1	.	.	.	.	.	.	.	.
$1361920_2 = \chi_{34,1}$	1	.	.	.	.	1	.	.	.	.
$1575936_1 = \chi_{37,0}$	.	1	.	.	.	.	1	.	.	.
$2375000_1 = \chi_{40,0}$	.	.	.	1	1	.	.	.	.	.
$3200000_2 = \chi_{45,1}$	.	.	1	.	.	.	.	1	.	.
$3878280_1 = \chi_{47,0}$	.	.	.	.	1	.	.	1	.	.
$4156250_2 = \chi_{48,1}$	.	.	1	.	.	.	.	.	1	.
$4809375_1 = \chi_{50,0}$	.	.	.	1	.	.	.	.	.	1
$5103000_2 = \chi_{51,1}$	.	.	.	.	.	.	1	.	1	.
$5103000_4 = \chi_{52,1}$	.	.	.	.	.	1	.	.	.	1

$$\begin{aligned}
\varphi_{1,1} &= 1_2 & \varphi_{39,1} &= 1361919_2 \\
\varphi_{4,0} &= 760_1 & \varphi_{40,0} &= 1575176_1 \\
\varphi_{26,1} &= 628426_2 & \varphi_{44,1} &= 2571574_2 \\
\varphi_{35,0} &= 1068294_1 & \varphi_{48,1} &= 3527824_2 \\
\varphi_{37,0} &= 1306706_1 & \varphi_{49,0} &= 3741081_1
\end{aligned}$$

<b>Block 3:</b>	$\varphi_{2+}$	$\varphi_{15+}$	$\varphi_{24+}$	$\varphi_{28+}$	$\varphi_{30+}$	
$266_1 = \chi_{2+}$	1	.	.	.	.	$\varphi_{2+} = 266_1$
$138510_1 = \chi_{15+}$	.	1	.	.	.	$\varphi_{15+} = 138510_1$
$1312500_1 = \chi_{25+}$	.	1	1	.	.	$\varphi_{24+} = 1173990_1$
$1436400_1 = \chi_{27+}$	1	.	.	1	.	$\varphi_{28+} = 1436134_1$
$2723840_1 = \chi_{35+}$	.	.	1	.	1	$\varphi_{30+} = 1549850_1$
$2985984_1 = \chi_{44,0}$	.	.	.	1	1	
$2985984_2 = \chi_{44,1}$	.	.	.	1	1	