

## $L_2(32) \pmod{3}$

|       | blocks | defect | matrix                           |
|-------|--------|--------|----------------------------------|
| $G :$ | 1      | 1      | $3 \times 2$                     |
|       | 2      | 1      | $3 \times 1$                     |
|       | 3      | 1      | $3 \times 1$                     |
|       | 4      | 1      | $3 \times 1$                     |
|       | 5      | 1      | $3 \times 1$                     |
|       | 6      | 1      | $3 \times 1$                     |
|       | 7      | 0      | $33_1 = \chi_{19}, \varphi_8$    |
|       | 8      | 0      | $33_2 = \chi_{20}, \varphi_9$    |
|       | 9      | 0      | $33_3 = \chi_{21}, \varphi_{10}$ |
|       | 10     | 0      | $33_4 = \chi_{22}, \varphi_{11}$ |
|       | 11     | 0      | $33_5 = \chi_{23}, \varphi_{12}$ |

|  | blocks | defect | matrix                              |
|--|--------|--------|-------------------------------------|
|  | 12     | 0      | $33_6 = \chi_{24}, \varphi_{13}$    |
|  | 13     | 0      | $33_7 = \chi_{25}, \varphi_{14}$    |
|  | 14     | 0      | $33_8 = \chi_{26}, \varphi_{15}$    |
|  | 15     | 0      | $33_9 = \chi_{27}, \varphi_{16}$    |
|  | 16     | 0      | $33_{10} = \chi_{28}, \varphi_{17}$ |
|  | 17     | 0      | $33_{11} = \chi_{29}, \varphi_{18}$ |
|  | 18     | 0      | $33_{12} = \chi_{30}, \varphi_{19}$ |
|  | 19     | 0      | $33_{13} = \chi_{31}, \varphi_{20}$ |
|  | 20     | 0      | $33_{14} = \chi_{32}, \varphi_{21}$ |
|  | 21     | 0      | $33_{15} = \chi_{33}, \varphi_{22}$ |

| <b>Block 1:</b>    | $\varphi_1$ | $\varphi_2$ |
|--------------------|-------------|-------------|
| $1_1 = \chi_1$     | 1           | .           |
| $31_1 = \chi_2$    | .           | 1           |
| $32_1 = \chi_{18}$ | 1           | 1           |

$$\begin{aligned} \varphi_1 &= 1_1 \\ \varphi_2 &= 31_1 \end{aligned}$$

| <b>Block 2:</b>       | $\varphi_3$ |
|-----------------------|-------------|
| $31_2 = \chi_3$       | 1           |
| $31_7 = \chi_8$       | 1           |
| $31_{12} = \chi_{13}$ | 1           |

$$\varphi_3 = 31_2$$

| <b>Block 3:</b>       | $\varphi_4$ |
|-----------------------|-------------|
| $31_3 = \chi_4$       | 1           |
| $31_8 = \chi_9$       | 1           |
| $31_{13} = \chi_{14}$ | 1           |

$$\varphi_4 = 31_3$$

| <b>Block 4:</b>       | $\varphi_5$ |
|-----------------------|-------------|
| $31_4 = \chi_5$       | 1           |
| $31_9 = \chi_{10}$    | 1           |
| $31_{14} = \chi_{15}$ | 1           |

$$\varphi_5 = 31_4$$

| <b>Block 5:</b>       | $\varphi_6$ |
|-----------------------|-------------|
| $31_5 = \chi_6$       | 1           |
| $31_{10} = \chi_{11}$ | 1           |
| $31_{15} = \chi_{16}$ | 1           |

$$\varphi_6 = 31_5$$

| <b>Block 6:</b>       | $\varphi_7$ |
|-----------------------|-------------|
| $31_6 = \chi_7$       | 1           |
| $31_{11} = \chi_{12}$ | 1           |
| $31_{16} = \chi_{17}$ | 1           |

$$\varphi_7 = 31_6$$