

$L_2(29) \pmod{2}$

|         | blocks | defect | matrix       |
|---------|--------|--------|--------------|
| $2.G :$ | 1      | 3      | $7 \times 3$ |
|         | 2      | 1      | $2 \times 1$ |
|         | 3      | 1      | $2 \times 1$ |
|         | 4      | 1      | $2 \times 1$ |
|         | 5      | 1      | $2 \times 1$ |
|         | 6      | 1      | $2 \times 1$ |

|  | blocks | defect | matrix       |
|--|--------|--------|--------------|
|  | 7      | 1      | $2 \times 1$ |
|  | 8      | 1      | $2 \times 1$ |
|  | 9      | 2      | $4 \times 1$ |
|  | 10     | 2      | $4 \times 1$ |
|  | 11     | 2      | $4 \times 1$ |
|  |        |        |              |

| Block 1:           | $\varphi_1$ | $\varphi_2$ | $\varphi_3$ |                                                               |
|--------------------|-------------|-------------|-------------|---------------------------------------------------------------|
| $1_1 = \chi_1$     | 1           | .           | .           | $\varphi_1 = 1_1$<br>$\varphi_2 = 14_1$<br>$\varphi_3 = 14_2$ |
| $15_1 = \chi_2$    | 1           | .           | 1           |                                                               |
| $15_2 = \chi_3$    | 1           | 1           | .           |                                                               |
| $29_1 = \chi_{11}$ | 1           | 1           | 1           |                                                               |
| $14_1 = \chi_{18}$ | .           | 1           | .           |                                                               |
| $14_2 = \chi_{19}$ | .           | .           | 1           |                                                               |
| $30_7 = \chi_{27}$ | 2           | 1           | 1           |                                                               |

| Block 2:           | $\varphi_4$ |                    |
|--------------------|-------------|--------------------|
| $28_1 = \chi_4$    | 1           | $\varphi_4 = 28_1$ |
| $28_8 = \chi_{20}$ | 1           |                    |

| Block 3:           | $\varphi_5$ |                    |
|--------------------|-------------|--------------------|
| $28_2 = \chi_5$    | 1           | $\varphi_5 = 28_2$ |
| $28_9 = \chi_{21}$ | 1           |                    |

| Block 4:              | $\varphi_6$ |                    |
|-----------------------|-------------|--------------------|
| $28_3 = \chi_6$       | 1           | $\varphi_6 = 28_3$ |
| $28_{10} = \chi_{22}$ | 1           |                    |

|                       |             |
|-----------------------|-------------|
| <b>Block 5:</b>       | $\varphi_7$ |
| $28_4 = \chi_7$       | 1           |
| $28_{11} = \chi_{23}$ | 1           |

$$\varphi_7 = 28_4$$

|                       |             |
|-----------------------|-------------|
| <b>Block 6:</b>       | $\varphi_8$ |
| $28_5 = \chi_8$       | 1           |
| $28_{12} = \chi_{24}$ | 1           |

$$\varphi_8 = 28_5$$

|                       |             |
|-----------------------|-------------|
| <b>Block 7:</b>       | $\varphi_9$ |
| $28_6 = \chi_9$       | 1           |
| $28_{13} = \chi_{25}$ | 1           |

$$\varphi_9 = 28_6$$

|                       |                |
|-----------------------|----------------|
| <b>Block 8:</b>       | $\varphi_{10}$ |
| $28_7 = \chi_{10}$    | 1              |
| $28_{14} = \chi_{26}$ | 1              |

$$\varphi_{10} = 28_7$$

|                       |                |
|-----------------------|----------------|
| <b>Block 9:</b>       | $\varphi_{11}$ |
| $30_1 = \chi_{12}$    | 1              |
| $30_4 = \chi_{15}$    | 1              |
| $30_8 = \chi_{28}$    | 1              |
| $30_{11} = \chi_{31}$ | 1              |

$$\varphi_{11} = 30_1$$

|                       |                |
|-----------------------|----------------|
| <b>Block 10:</b>      | $\varphi_{12}$ |
| $30_2 = \chi_{13}$    | 1              |
| $30_5 = \chi_{16}$    | 1              |
| $30_9 = \chi_{29}$    | 1              |
| $30_{12} = \chi_{32}$ | 1              |

$$\varphi_{12} = 30_2$$

| Block 11:             | $\varphi_{13}$ |
|-----------------------|----------------|
| $30_3 = \chi_{14}$    | 1              |
| $30_6 = \chi_{17}$    | 1              |
| $30_{10} = \chi_{30}$ | 1              |
| $30_{13} = \chi_{33}$ | 1              |

$$\varphi_{13} = 30_3$$