

$U_3(7) \pmod{3}$

| | blocks | defect | matrix | | blocks | defect | matrix |
|-------|----------------------|--------|-----------------------------------|--|----------------------|--------|--------------------------------------|
| $G :$ | 1 | 1 | 3×2 | | $18 = \overline{17}$ | 1 | 3×1 |
| | 2 | 0 | $42_1 = \chi_2, \varphi_2$ | | 19 | 1 | 3×1 |
| | 3 | 1 | 3×2 | | $20 = \overline{19}$ | 1 | 3×1 |
| | 4 | 1 | 3×2 | | 21 | 0 | $384_1 = \chi_{45}, \varphi_{29}$ |
| | $5 = \overline{4}$ | 1 | 3×2 | | $22 = \overline{21}$ | 0 | $384_2 = \chi_{46}, \varphi_{30}$ |
| | 6 | 1 | 3×2 | | 23 | 0 | $384_3 = \chi_{47}, \varphi_{31}$ |
| | $7 = \overline{6}$ | 1 | 3×2 | | $24 = \overline{23}$ | 0 | $384_4 = \chi_{48}, \varphi_{32}$ |
| | 8 | 1 | 3×2 | | 25 | 0 | $384_5 = \chi_{49}, \varphi_{33}$ |
| | $9 = \overline{8}$ | 1 | 3×2 | | $26 = \overline{25}$ | 0 | $384_6 = \chi_{50}, \varphi_{34}$ |
| | 10 | 0 | $258_1 = \chi_{10}, \varphi_{10}$ | | 27 | 0 | $384_7 = \chi_{51}, \varphi_{35}$ |
| | 11 | 0 | $258_2 = \chi_{11}, \varphi_{11}$ | | $28 = \overline{27}$ | 0 | $384_8 = \chi_{52}, \varphi_{36}$ |
| | 12 | 0 | $258_3 = \chi_{12}, \varphi_{12}$ | | 29 | 0 | $384_9 = \chi_{53}, \varphi_{37}$ |
| | 13 | 0 | $258_4 = \chi_{13}, \varphi_{13}$ | | $30 = \overline{29}$ | 0 | $384_{10} = \chi_{54}, \varphi_{38}$ |
| | $14 = \overline{13}$ | 0 | $258_5 = \chi_{14}, \varphi_{14}$ | | 31 | 0 | $384_{11} = \chi_{55}, \varphi_{39}$ |
| | 15 | 0 | $258_6 = \chi_{15}, \varphi_{15}$ | | $32 = \overline{31}$ | 0 | $384_{12} = \chi_{56}, \varphi_{40}$ |
| | $16 = \overline{15}$ | 0 | $258_7 = \chi_{16}, \varphi_{16}$ | | 33 | 0 | $384_{13} = \chi_{57}, \varphi_{41}$ |
| | 17 | 1 | 3×1 | | $34 = \overline{33}$ | 0 | $384_{14} = \chi_{58}, \varphi_{42}$ |

| Block 1: | φ_1 | φ_{24} |
|---------------------|-------------|----------------|
| $1_1 = \chi_1$ | 1 | . |
| $343_1 = \chi_{24}$ | . | 1 |
| $344_2 = \chi_{26}$ | 1 | 1 |

$$\begin{aligned} \varphi_1 &= 1_1 \\ \varphi_{24} &= 343_1 \end{aligned}$$

| Block 3: | φ_3 | φ_{17} |
|---------------------|-------------|----------------|
| $43_1 = \chi_3$ | 1 | . |
| $301_1 = \chi_{17}$ | . | 1 |
| $344_1 = \chi_{25}$ | 1 | 1 |

$$\begin{aligned} \varphi_3 &= 43_1 \\ \varphi_{17} &= 301_1 \end{aligned}$$

| Block 4: | φ_4 | φ_{18} |
|---------------------|-------------|----------------|
| $43_2 = \chi_4$ | 1 | . |
| $301_2 = \chi_{18}$ | . | 1 |
| $344_3 = \chi_{27}$ | 1 | 1 |

$$\begin{aligned} \varphi_4 &= 43_2 \\ \varphi_{18} &= 301_2 \end{aligned}$$

| Block 5: | φ_5 | φ_{19} |
|---------------------|-------------|----------------|
| $43_3 = \chi_5$ | 1 | . |
| $301_3 = \chi_{19}$ | . | 1 |
| $344_4 = \chi_{28}$ | 1 | 1 |

$$\begin{aligned}\varphi_5 &= 43_3 \\ \varphi_{19} &= 301_3\end{aligned}$$

| Block 6: | φ_6 | φ_{20} |
|---------------------|-------------|----------------|
| $43_4 = \chi_6$ | 1 | . |
| $301_4 = \chi_{20}$ | . | 1 |
| $344_7 = \chi_{31}$ | 1 | 1 |

$$\begin{aligned}\varphi_6 &= 43_4 \\ \varphi_{20} &= 301_4\end{aligned}$$

| Block 7: | φ_7 | φ_{21} |
|---------------------|-------------|----------------|
| $43_5 = \chi_7$ | 1 | . |
| $301_5 = \chi_{21}$ | . | 1 |
| $344_8 = \chi_{32}$ | 1 | 1 |

$$\begin{aligned}\varphi_7 &= 43_5 \\ \varphi_{21} &= 301_5\end{aligned}$$

| Block 8: | φ_8 | φ_{22} |
|---------------------|-------------|----------------|
| $43_6 = \chi_8$ | 1 | . |
| $301_6 = \chi_{22}$ | . | 1 |
| $344_5 = \chi_{29}$ | 1 | 1 |

$$\begin{aligned}\varphi_8 &= 43_6 \\ \varphi_{22} &= 301_6\end{aligned}$$

| Block 9: | φ_9 | φ_{23} |
|---------------------|-------------|----------------|
| $43_7 = \chi_9$ | 1 | . |
| $301_7 = \chi_{23}$ | . | 1 |
| $344_6 = \chi_{30}$ | 1 | 1 |

$$\begin{aligned}\varphi_9 &= 43_7 \\ \varphi_{23} &= 301_7\end{aligned}$$

| Block 17: | φ_{25} |
|------------------------|----------------|
| $344_9 = \chi_{33}$ | 1 |
| $344_{16} = \chi_{40}$ | 1 |
| $344_{20} = \chi_{44}$ | 1 |

$$\varphi_{25} = 344_1$$

| Block 18: | φ_{26} | |
|------------------------|----------------|------------------------|
| $344_{10} = \chi_{34}$ | 1 | $\varphi_{26} = 344_2$ |
| $344_{15} = \chi_{39}$ | 1 | |
| $344_{19} = \chi_{43}$ | 1 | |

| Block 19: | φ_{27} | |
|------------------------|----------------|------------------------|
| $344_{11} = \chi_{35}$ | 1 | $\varphi_{27} = 344_3$ |
| $344_{14} = \chi_{38}$ | 1 | |
| $344_{18} = \chi_{42}$ | 1 | |

| Block 20: | φ_{28} | |
|------------------------|----------------|------------------------|
| $344_{12} = \chi_{36}$ | 1 | $\varphi_{28} = 344_4$ |
| $344_{13} = \chi_{37}$ | 1 | |
| $344_{17} = \chi_{41}$ | 1 | |