

The group G is isomorphic to the group labelled by [25, 2] in the Small Groups library.

Ordinary character table of $G \cong C5 \times C5$:

| | 1a | 5a | 5b | 5c | 5d | 5e | 5f | 5g | 5h | 5i | 5j | 5k | 5l | 5m | 5n | 5o | 5p | 5q | 5r | 5s | 5t | 5u | 5v | 5w | 5x |
|-------------|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| χ_1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| χ_2 | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ |
| χ_3 | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ |
| χ_4 | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ |
| χ_5 | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ |
| χ_6 | 1 | 1 | 1 | 1 | 1 | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ |
| χ_7 | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ |
| χ_8 | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ |
| χ_9 | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ |
| χ_{10} | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 |
| χ_{11} | 1 | 1 | 1 | 1 | 1 | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ |
| χ_{12} | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ |
| χ_{13} | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ |
| χ_{14} | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 |
| χ_{15} | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ |
| χ_{16} | 1 | 1 | 1 | 1 | 1 | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ |
| χ_{17} | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ |
| χ_{18} | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 |
| χ_{19} | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ |
| χ_{20} | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ |
| χ_{21} | 1 | 1 | 1 | 1 | 1 | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^4$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^3$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)^2$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ | $E(5)$ |
| χ_{22} | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)^2$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 | $E(5)$ | $E(5)$ | $E(5)^2$ | $E(5)^3$ | $E(5)^4$ | 1 |
| χ_{23} | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^2$ | $E(5)^4$ | $E(5)$ | $E(5)^3$ | 1 | $E(5)$ | $E(5)^3$ | 1 | $E(5)^2$ | $E(5)^4$ |
| χ_{24} | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^2$ | 1 | $E(5)^3$ | $E(5)$ | $E(5)^4$ | $E(5)$ | $E(5)^4$ | $E(5)^2$ | 1 | $E(5)^3$ |
| χ_{25} | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^3$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^2$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)$ | 1 | $E(5)^4$ | $E(5)^3$ | $E(5)^2$ |

Trivial source character table of $G \cong C5 \times C5$ at $p = 5$:

| Normalisers N_i | N_1 | N_2 | N_3 | N_4 | N_5 | N_6 | N_7 | N_8 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| p -subgroups of G up to conjugacy in G | P_1 | P_2 | P_3 | P_4 | P_5 | P_6 | P_7 | P_8 |
| Representatives $n_j \in N_i$ | 1a | 1a | 1a | 1a | 1a | 1a | 1a | 1a |
| $1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14} + 1 \cdot \chi_{15} + 1 \cdot \chi_{16} + 1 \cdot \chi_{17} + 1 \cdot \chi_{18} + 1 \cdot \chi_{19} + 1 \cdot \chi_{20} + 1 \cdot \chi_{21} + 1 \cdot \chi_{22} + 1 \cdot \chi_{23} + 1 \cdot \chi_{24} + 1 \cdot \chi_{25}$ | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} + 0 \cdot \chi_{19} + 0 \cdot \chi_{20} + 1 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 0 \cdot \chi_{25}$ | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| $1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} + 0 \cdot \chi_{19} + 0 \cdot \chi_{20} + 0 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 0 \cdot \chi_{25}$ | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 1 \cdot \chi_{18} + 0 \cdot \chi_{19} + 0 \cdot \chi_{20} + 0 \cdot \chi_{21} + 1 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 0 \cdot \chi_{25}$ | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16} + 1 \cdot \chi_{17} + 0 \cdot \chi_{18} + 0 \cdot \chi_{19} + 0 \cdot \chi_{20} + 0 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 1 \cdot \chi_{24} + 0 \cdot \chi_{25}$ | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} + 1 \cdot \chi_{19} + 0 \cdot \chi_{20} + 0 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 1 \cdot \chi_{25}$ | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} + 0 \cdot \chi_{19} + 0 \cdot \chi_{20} + 0 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 0 \cdot \chi_{25}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

$$P_1 = \text{Group}([()]) \cong 1$$

$$P_2 = \text{Group}([(6, 7, 8, 9, 10)]) \cong C5$$

$$P_3 = \text{Group}([(1, 2, 3, 4, 5)]) \cong C5$$

$$P_4 = \text{Group}([(1, 2, 3, 4, 5)(6, 7, 8, 9, 10)]) \cong C5$$

$$P_5 = \text{Group}([(1, 3, 5, 2, 4)(6, 7, 8, 9, 10)]) \cong C5$$

$$P_6 = \text{Group}([(1, 4, 2, 5, 3)(6, 7, 8, 9, 10)]) \cong C5$$

$$P_7 = \text{Group}([(1, 5, 4, 3, 2)(6, 7, 8, 9, 10)]) \cong C5$$

$$P_8 = \text{Group}([(6, 7, 8, 9, 10), (1, 2, 3, 4, 5)]) \cong C5 \times C5$$

$$N_1 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_2 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_3 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_4 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_5 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_6 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_7 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$

$$N_8 = \text{Group}([(1, 2, 3, 4, 5), (6, 7, 8, 9, 10)]) \cong C5 \times C5$$