

The group  $G$  is isomorphic to the group labelled by [ 50, 4 ] in the Small Groups library.  
 Ordinary character table of  $G \cong (C5 \times C5) : C2$ :

|             | 1a | 2a | 5a                | 5b                | 5c                | 5d                | 5e                | 5f                | 5g                | 5h                | 5i                | 5j                | 5k                | 5l                |
|-------------|----|----|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| $\chi_1$    | 1  | 1  | 1                 |                   | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 |
| $\chi_2$    | 1  | -1 | 1                 |                   | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 | 1                 |
| $\chi_3$    | 2  | 0  | 2                 | $E(5)^2 + E(5)^3$ | 2                 | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   |
| $\chi_4$    | 2  | 0  | 2                 | $E(5) + E(5)^4$   | 2                 | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   |
| $\chi_5$    | 2  | 0  | $E(5)^2 + E(5)^3$ | 2                 | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | 2                 | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   |
| $\chi_6$    | 2  | 0  | $E(5) + E(5)^4$   | 2                 | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | 2                 | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ |
| $\chi_7$    | 2  | 0  | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | 2                 | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ |
| $\chi_8$    | 2  | 0  | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | 2                 | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ |
| $\chi_9$    | 2  | 0  | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   |
| $\chi_{10}$ | 2  | 0  | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ |
| $\chi_{11}$ | 2  | 0  | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   |
| $\chi_{12}$ | 2  | 0  | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   |
| $\chi_{13}$ | 2  | 0  | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ |
| $\chi_{14}$ | 2  | 0  | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ | $E(5)^2 + E(5)^3$ | $E(5) + E(5)^4$   | $E(5)^2 + E(5)^3$ |

Trivial source character table of  $G \cong (C5 \times C5) : C2$  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 2a |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14}$ | 25 -1 | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14}$ | 25 1  | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 -1  | 5 -1  | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 1   | 5 1   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 -1  | 0 0   | 5 -1  | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 1   | 0 0   | 5 1   | 0 0   | 0 0   | 0 0   | 0 0   | 0 0   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 -1  | 0 0   | 0 0   | 5 -1  | 0 0   | 0 0   | 0 0   | 0 0   |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 1   | 0 0   | 0 0   | 5 1   | 0 0   | 0 0   | 0 0   | 0 0   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 -1  | 0 0   | 0 0   | 0 0   | 5 -1  | 0 0   | 0 0   | 0 0   |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 1   | 0 0   | 0 0   | 0 0   | 5 1   | 0 0   | 0 0   | 0 0   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 -1  | 0 0   | 0 0   | 0 0   | 0 0   | 5 -1  | 0 0   | 0 0   |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 5 1   | 0 0   | 0 0   | 0 0   | 0 0   | 5 1   | 0 0   | 0 0   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 1 1   | 1 1   | 1 1   | 1 1   | 1 1   | 1 1   | 1 1   | 1 1   |
| $0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}$ | 1 -1  | 1 -1  | 1 -1  | 1 -1  | 1 -1  | 1 -1  | 1 -1  | 1 -1  |

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

$$P_2 = \text{Group}(\{(1, 4, 9, 16, 25)(2, 6, 12, 20, 30)(3, 8, 15, 24, 34)(5, 11, 19, 29, 38)(7, 14, 23, 33, 41)(10, 18, 28, 37, 44)(13, 22, 32, 40, 46)(17, 27, 36, 43, 48)(21, 31, 39, 45, 49)(26, 35, 42, 47, 50)\}) \cong C5$$

$$P_3 = \text{Group}(\{(1, 3, 7, 13, 21)(2, 5, 10, 17, 26)(4, 8, 14, 22, 31)(6, 11, 18, 27, 35)(9, 15, 23, 32, 39)(12, 19, 28, 36, 42)(16, 24, 33,$$