

The group G is isomorphic to the group labelled by [42, 5] in the Small Groups library.
 Ordinary character table of $G \cong \text{D42}$:

| | 1a | 2a | 3a | 7a | 21a | 7b | 21b | 21c | 7c | 21d | 21e | 21f |
|-------------|----|----|----|-------------------|---------------------------|-------------------|---------------------------|---------------------------|-------------------|---------------------------|---------------------------|---------------------------|
| χ_1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| χ_2 | 1 | -1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| χ_3 | 2 | 0 | -1 | 2 | -1 | 2 | -1 | -1 | 2 | -1 | -1 | -1 |
| χ_4 | 2 | 0 | 2 | $E(7)^2 + E(7)^5$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7) + E(7)^6$ |
| χ_5 | 2 | 0 | 2 | $E(7) + E(7)^6$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7)^3 + E(7)^4$ |
| χ_6 | 2 | 0 | 2 | $E(7)^3 + E(7)^4$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7)^2 + E(7)^5$ |
| χ_7 | 2 | 0 | -1 | $E(7)^3 + E(7)^4$ | $E(21)^5 + E(21)^{16}$ | $E(7) + E(7)^6$ | $E(21)^2 + E(21)^{19}$ | $E(21)^4 + E(21)^{17}$ | $E(7)^2 + E(7)^5$ | $E(21)^{10} + E(21)^{11}$ | $E(21)^8 + E(21)^{13}$ | $E(21) + E(21)^{20}$ |
| χ_8 | 2 | 0 | -1 | $E(7)^3 + E(7)^4$ | $E(21)^2 + E(21)^{19}$ | $E(7) + E(7)^6$ | $E(21)^5 + E(21)^{16}$ | $E(21)^{10} + E(21)^{11}$ | $E(7)^2 + E(7)^5$ | $E(21)^4 + E(21)^{17}$ | $E(21) + E(21)^{20}$ | $E(21)^8 + E(21)^{13}$ |
| χ_9 | 2 | 0 | -1 | $E(7)^2 + E(7)^5$ | $E(21)^8 + E(21)^{13}$ | $E(7)^3 + E(7)^4$ | $E(21) + E(21)^{20}$ | $E(21)^2 + E(21)^{19}$ | $E(7) + E(7)^6$ | $E(21)^5 + E(21)^{16}$ | $E(21)^4 + E(21)^{17}$ | $E(21)^{10} + E(21)^{11}$ |
| χ_{10} | 2 | 0 | -1 | $E(7)^2 + E(7)^5$ | $E(21) + E(21)^{20}$ | $E(7)^3 + E(7)^4$ | $E(21)^8 + E(21)^{13}$ | $E(21)^5 + E(21)^{16}$ | $E(7) + E(7)^6$ | $E(21)^2 + E(21)^{19}$ | $E(21)^{10} + E(21)^{11}$ | $E(21)^4 + E(21)^{17}$ |
| χ_{11} | 2 | 0 | -1 | $E(7) + E(7)^6$ | $E(21)^{10} + E(21)^{11}$ | $E(7)^2 + E(7)^5$ | $E(21)^4 + E(21)^{17}$ | $E(21)^8 + E(21)^{13}$ | $E(7)^3 + E(7)^4$ | $E(21) + E(21)^{20}$ | $E(21)^5 + E(21)^{16}$ | $E(21)^2 + E(21)^{19}$ |
| χ_{12} | 2 | 0 | -1 | $E(7) + E(7)^6$ | $E(21)^4 + E(21)^{17}$ | $E(7)^2 + E(7)^5$ | $E(21)^{10} + E(21)^{11}$ | $E(21) + E(21)^{20}$ | $E(7)^3 + E(7)^4$ | $E(21)^8 + E(21)^{13}$ | $E(21)^2 + E(21)^{19}$ | $E(21)^5 + E(21)^{16}$ |

Trivial source character table of $G \cong \text{D42}$ at $p = 2$:

| Normalisers N_i | N_1 | | | | | | | | | | | | N_2 |
|--|-------|----|-------------------|---------------------------|-------------------|---------------------------|---------------------------|-------------------|---------------------------|---------------------------|---------------------------|----|-------|
| p -subgroups of G up to conjugacy in G | P_1 | | | | | | | | | | | | P_2 |
| Representatives $n_j \in N_i$ | 1a | 3a | 7a | 21a | 7b | 21b | 21c | 7c | 21d | 21e | 21f | 1a | |
| $1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | -1 | 2 | -1 | 2 | -1 | -1 | 2 | -1 | -1 | -1 | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | 2 | $E(7)^2 + E(7)^5$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7) + E(7)^6$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | 2 | $E(7) + E(7)^6$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7)^2 + E(7)^5$ | $E(7)^3 + E(7)^4$ | $E(7)^3 + E(7)^4$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | 2 | $E(7)^3 + E(7)^4$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7)^3 + E(7)^4$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7) + E(7)^6$ | $E(7)^2 + E(7)^5$ | $E(7)^2 + E(7)^5$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | -1 | $E(7)^3 + E(7)^4$ | $E(21)^5 + E(21)^{16}$ | $E(7) + E(7)^6$ | $E(21)^2 + E(21)^{19}$ | $E(21)^4 + E(21)^{17}$ | $E(7)^2 + E(7)^5$ | $E(21)^{10} + E(21)^{11}$ | $E(21)^8 + E(21)^{13}$ | $E(21) + E(21)^{20}$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | -1 | $E(7)^3 + E(7)^4$ | $E(21)^2 + E(21)^{19}$ | $E(7) + E(7)^6$ | $E(21)^5 + E(21)^{16}$ | $E(21)^{10} + E(21)^{11}$ | $E(7)^2 + E(7)^5$ | $E(21)^4 + E(21)^{17}$ | $E(21) + E(21)^{20}$ | $E(21)^8 + E(21)^{13}$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | -1 | $E(7)^2 + E(7)^5$ | $E(21)^8 + E(21)^{13}$ | $E(7)^3 + E(7)^4$ | $E(21) + E(21)^{20}$ | $E(21)^2 + E(21)^{19}$ | $E(7) + E(7)^6$ | $E(21)^5 + E(21)^{16}$ | $E(21)^4 + E(21)^{17}$ | $E(21)^{10} + E(21)^{11}$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | -1 | $E(7)^2 + E(7)^5$ | $E(21) + E(21)^{20}$ | $E(7)^3 + E(7)^4$ | $E(21)^8 + E(21)^{13}$ | $E(21)^5 + E(21)^{16}$ | $E(7) + E(7)^6$ | $E(21)^2 + E(21)^{19}$ | $E(21)^{10} + E(21)^{11}$ | $E(21)^4 + E(21)^{17}$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 2 | -1 | $E(7) + E(7)^6$ | $E(21)^{10} + E(21)^{11}$ | $E(7)^2 + E(7)^5$ | $E(21)^4 + E(21)^{17}$ | $E(21)^8 + E(21)^{13}$ | $E(7)^3 + E(7)^4$ | $E(21) + E(21)^{20}$ | $E(21)^5 + E(21)^{16}$ | $E(21)^2 + E(21)^{19}$ | 0 | |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12}$ | 2 | -1 | $E(7) + E(7)^6$ | $E(21)^4 + E(21)^{17}$ | $E(7)^2 + E(7)^5$ | $E(21)^{10} + E(21)^{11}$ | $E(21) + E(21)^{20}$ | $E(7)^3 + E(7)^4$ | $E(21)^8 + E(21)^{13}$ | $E(21)^2 + E(21)^{19}$ | $E(21)^5 + E(21)^{16}$ | 0 | |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

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

$$P_2 = \text{Group}([(1, 2)(3, 10)(4, 36)(5, 7)(6, 33)(8, 42)(9, 30)(11, 41)(12, 27)(13, 40)(14, 39)(15, 24)(16, 38)(17, 37)(18, 21)(19, 35)(20, 34)(22, 32)(23, 31)(25, 29)(26, 28)]) \cong \text{C2}$$

$$N_1 = \text{Group}([(1, 2)(3, 10)(4, 36)(5, 7)(6, 33)(8, 42)(9, 30)(11, 41)(12, 27)(13, 40)(14, 39)(15, 24)(16, 38)(17, 37)(18, 21)(19, 35)(20, 34)(22, 32)(23, 31)(25, 29)(26, 28), (1, 3, 7)(2, 5, 10)(4, 8, 13)(6, 11, 16)(9, 14, 19)(12, 17, 22)(15, 20, 25)(18, 23, 28)(21, 26, 31)(24, 29, 34)(27, 32, 37)(30, 35, 39)(33, 38, 41)(36, 40, 42), (1, 4, 9, 15, 21, 27, 33)(2, 6, 12, 18, 24, 30, 36)(3, 8, 14, 20, 26, 32, 38)(5, 11, 17, 23, 29, 35, 40)(7, 13, 19, 25, 31, 37, 41)(10, 16, 22, 28, 34, 39, 42)]) \cong \text{D42}$$

$$N_2 = \text{Group}([(1, 2)(3, 10)(4, 36)(5, 7)(6, 33)(8, 42)(9, 30)(11, 41)(12, 27)(13, 40)(14, 39)(15, 24)(16, 38)(17, 37)(18, 21)(19, 35)(20, 34)(22, 32)(23, 31)(25, 29)(26, 28)]) \cong \text{C2}$$