

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
$\chi_1$	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
$\chi_3$	2	0	-1	2	-1	2	-1	-1	2	-1	-1	-1
$\chi_4$	2	0	2	$E(7)^2 + E(7)^5$	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	$E(7) + E(7)^6$
$\chi_5$	2	0	2	$E(7) + E(7)^6$	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	$E(7)^3 + E(7)^4$
$\chi_6$	2	0	2	$E(7)^3 + E(7)^4$	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	$E(7)^2 + E(7)^5$
$\chi_7$	2	0	-1	$E(7)^3 + E(7)^4$	$E(21)^5 + E(21)^{16}$	$E(7) + E(7)^6$	$E(21)^2 + E(21)^{19}$	$E(21)^4 + E(21)^{17}$	$E(7)^2 + E(7)^5$	$E(21)^{10} + E(21)^{11}$	$E(21)^8 + E(21)^{13}$	$E(21) + E(21)^{20}$
$\chi_8$	2	0	-1	$E(7)^3 + E(7)^4$	$E(21)^2 + E(21)^{19}$	$E(7) + E(7)^6$	$E(21)^5 + E(21)^{16}$	$E(21)^{10} + E(21)^{11}$	$E(7)^2 + E(7)^5$	$E(21)^4 + E(21)^{17}$	$E(21) + E(21)^{20}$	$E(21)^8 + E(21)^{13}$
$\chi_9$	2	0	-1	$E(7)^2 + E(7)^5$	$E(21)^8 + E(21)^{13}$	$E(7)^3 + E(7)^4$	$E(21)^3 + E(7)^4$	$E(21)^8 + E(21)^{13}$	$E(7) + E(7)^6$	$E(21)^5 + E(21)^{16}$	$E(21)^4 + E(21)^{17}$	$E(21)^{10} + E(21)^{11}$
$\chi_{10}$	2	0	-1	$E(7)^2 + E(7)^5$	$E(21) + E(21)^{20}$	$E(7)^3 + E(7)^4$	$E(21)^8 + E(21)^{13}$	$E(21)^5 + E(21)^{16}$	$E(7) + E(7)^6$	$E(21)^2 + E(21)^{19}$	$E(21)^{10} + E(21)^{11}$	$E(21)^4 + E(21)^{17}$
$\chi_{11}$	2	0	-1	$E(7) + E(7)^6$	$E(21)^{10} + E(21)^{11}$	$E(7)^2 + E(7)^5$	$E(21)^4 + E(21)^{17}$	$E(21)^8 + E(21)^{13}$	$E(7)^3 + E(7)^4$	$E(21) + E(21)^{20}$	$E(21)^5 + E(21)^{16}$	$E(21)^2 + E(21)^{19}$
$\chi_{12}$	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  $p = 3$ :

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	2a	7a	7b	7c	1a	2a	7c	7a	7b
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	3	1	3	3	3	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	3	-1	3	3	3	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	6	0	$3 * E(7)^2 + 3 * E(7)^5$	$3 * E(7)^3 + 3 * E(7)^4$	$3 * E(7) + 3 * E(7)^6$	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12}$	6	0	$3 * E(7) + 3 * E(7)^6$	$3 * E(7)^2 + 3 * E(7)^5$	$3 * E(7)^3 + 3 * E(7)^4$	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	6	0	$3 * E(7)^3 + 3 * E(7)^4$	$3 * E(7) + 3 * E(7)^6$	$3 * E(7)^2 + 3 * E(7)^5$	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	1	1	1	1	1	1	1	1	1	1
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	1	-1	1	1	1	1	-1	1	1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	2	0	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	2	0	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	2	0	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	2	0	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12}$	2	0	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$	$E(7)^2 + E(7)^5$	2	0	$E(7)^2 + E(7)^5$	$E(7)^3 + E(7)^4$	$E(7) + E(7)^6$

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

$$P_2 = \text{Group}([(1, 7, 3)(2, 10, 5)(4, 13, 8)(6, 16, 11)(9, 19, 14)(12, 22, 17)(15, 25, 20)(18, 28, 23)(21, 31, 26)(24, 34, 29)(27, 37, 32)(30, 39, 35)(33, 41, 38)(36, 42, 40)]) \cong \text{C3}$$

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

$$N_2 = \text{Group}([(1, 7, 3)(2, 10, 5)(4, 13, 8)(6, 16, 11)(9, 19, 14)(12, 22, 17)(15, 25, 20)(18, 28, 23)(21, 31, 26)(24, 34, 29)(27, 37, 32)(30, 39, 35)(33, 41, 38)(36, 42, 40), (1, 2)(3, 10)(4, 36)(5, 7)(6, 33)(8, 42)(9, 30)(11, 41)(12, 27)(13, 40)(14, 39)(15, 24)(16, 38)(17, 37)(18, 21)(19, 35)(20, 34)(22, 32)(23, 31)(25, 29)(26, 28), (1, 4, 9, 15, 21, 27, 33)(2, 6, 12, 18, 24, 30, 36)(3, 8, 14, 20, 26, 32, 38)(5, 11, 17, 23, 29, 35, 40)(7, 13, 19, 25, 31, 37, 41)(10, 16, 22, 28, 34, 39, 42)]) \cong \text{D42}$$