

The group G is isomorphic to the alternating group A7.
 Ordinary character table of $G \cong \text{A7}$:

	1 <i>a</i>	2 <i>a</i>	3 <i>a</i>	3 <i>b</i>	4 <i>a</i>	5 <i>a</i>	6 <i>a</i>	7 <i>a</i>	7 <i>b</i>
χ_1	1	1	1	1	1	1	1	1	1
χ_2	6	2	3	0	0	1	−1	−1	−1
χ_3	10	−2	1	1	0	0	1	$E(7) + E(7)^2 + E(7)^4$	$E(7)^3 + E(7)^5 + E(7)^6$
χ_4	10	−2	1	1	0	0	1	$E(7)^3 + E(7)^5 + E(7)^6$	$E(7) + E(7)^2 + E(7)^4$
χ_5	14	2	2	−1	0	−1	2	0	0
χ_6	14	2	−1	2	0	−1	−1	0	0
χ_7	15	−1	3	0	−1	0	−1	1	1
χ_8	21	1	−3	0	−1	1	1	0	0
χ_9	35	−1	−1	−1	1	0	−1	0	0

Trivial source character table of $G \cong \text{A7}$ at $p = 2$:

Normalisers N_i	N_1						N_2	N_3		N_4					N_5	N_6	
p -subgroups of G up to conjugacy in G	P_1						P_2	P_3		P_4					P_5	P_6	
Representatives $n_j \in N_i$	1a	3a	3b	7a	7b	5a	1a	3a	1a	3a	1a	3a	3b	3c	3d	1a	1a
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9$	72	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	64	4	−2	1	1	−1	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9$	56	−4	−1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	24	0	3	$E(7) + E(7)^2 + E(7)^4$	$E(7)^3 + E(7)^5 + E(7)^6$	−1	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	24	0	3	$E(7)^3 + E(7)^5 + E(7)^6$	$E(7) + E(7)^2 + E(7)^4$	−1	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	40	4	4	−2	−2	0	0	0	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 2 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9$	100	4	−2	2	2	0	4	4	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	20	2	2	−1	−1	0	4	−2	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9$	22	−2	1	1	1	2	2	2	2	2	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	14	2	−1	0	0	−1	2	2	2	−1	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	30	6	0	2	2	0	2	2	0	0	2	2	2	2	2	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	6	3	0	−1	−1	1	2	−1	0	0	2	2	−1	−1	−1	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9$	70	−2	−2	0	0	0	2	2	0	0	2	−1	2	−1	−1	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	14	−1	2	0	0	−1	2	−1	0	0	2	−1	−1	2	−1	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	14	−1	2	0	0	−1	2	−1	0	0	2	−1	−1	−1	2	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	50	2	−1	1	1	0	2	2	0	0	0	0	0	0	0	2	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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

$$P_1 = Group([()]) \cong 1$$

$$P_2 = Group([(3,6)(5,7)]) \cong \text{C2}$$

$$P_3 = Group([(2,4)(5,7),(3,6)(5,7)]) \cong \text{C2 x C2}$$

$$P_4 = Group([(2,6)(3,4),(2,4)(3,6)]) \cong \text{C2 x C2}$$

$$P_5 = Group([(2,3,4,6)(5,7),(2,4)(3,6)]) \cong \text{C4}$$

$$P_6 = Group([(2,4)(5,7),(3,6)(5,7),(2,6)(3,4)]) \cong \text{D8}$$

$$N_1 = AlternatingGroup([1..7]) \cong \text{A7}$$

$$N_2 = Group([(1,2,4),(1,2)(5,7),(1,2)(3,6),(3,5)(6,7)]) \cong (\text{C6 x C2}) : \text{C2}$$

$$N_3 = Group([(3,6)(5,7),(2,4)(5,7),(3,7)(5,6),(2,3,7)(4,6,5)]) \cong \text{S4}$$

$$N_4 = Group([(1,5,7),(3,4,6),(1,5)(2,6)]) \cong (\text{C3 x A4}) : \text{C2}$$

$$N_5 = Group([(2,4)(3,6),(2,6,4,3)(5,7),(3,6)(5,7)]) \cong \text{D8}$$

$$N_6 = Group([(3,6)(5,7),(2,4)(5,7),(2,3)(4,6)]) \cong \text{D8}$$