

The group G is isomorphic to the group labelled by ["could not identify G !!!"] in the Small Groups library.
 Ordinary character table of $G \cong A7$:

	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 $G \cong A7$ at $p = 3$:

Normalisers N_i	N_1								N_2				N_3		N_4			
p -subgroups of G up to conjugacy in G	P_1								P_2				P_3		P_4			
Representatives $n_j \in N_i$	1 <i>a</i>	5 <i>a</i>	2 <i>a</i>	4 <i>a</i>	7 <i>a</i>				7 <i>b</i>				1 <i>a</i>	2 <i>a</i>	1 <i>a</i>	4 <i>b</i>	2 <i>a</i>	4 <i>a</i>
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	63	−2	3	1	0				0				0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9$	36	1	0	−2	1				1				0	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9$	27	2	3	−1	−1				−1				0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	45	0	−3	1	$E(7)^3 + E(7)^5 + E(7)^6$				$E(7) + E(7)^2 + E(7)^4$				0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	45	0	−3	1	$E(7) + E(7)^2 + E(7)^4$				$E(7)^3 + E(7)^5 + E(7)^6$				0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 2 \cdot \chi_9$	99	−1	3	3	1				1				0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	69	−1	−3	1	−1				−1				3	−1	3	−1	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	15	0	3	1	1				1				3	1	3	1	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	1	2	0	−1				−1				3	1	−1	−1	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	15	0	−1	−1	1				1				3	−1	−1	1	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	15	0	3	1	1				1				0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9$	69	−1	−3	1	−1				−1				0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	1	1	1	1	1				1				1	1	1	1	1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	28	−2	4	0	0				0				1	1	1	1	1	−1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	10	0	−2	0	$E(7) + E(7)^2 + E(7)^4$				$E(7)^3 + E(7)^5 + E(7)^6$				1	−1	1	−1	1	$E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9$	10	0	−2	0	$E(7)^3 + E(7)^5 + E(7)^6$				$E(7) + E(7)^2 + E(7)^4$				1	−1	1	−1	1	$−E(4)$

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

$$P_2 = Group([(4,5,6)]) \cong C3$$

$$P_3 = Group([(1,3,2)(4,5,6)]) \cong C3$$

$$P_4 = Group([(4,5,6),(1,3,2)]) \cong C3 \times C3$$

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

$$N_2 = Group([(1,3)(2,7),(2,3,7),(4,5,6),(1,2,3,7)(5,6)]) \cong (C3 \times A4) : C2$$

$$N_3 = Group([(1,3,2)(4,5,6),(4,5,6),(2,3)(4,6)]) \cong (C3 \times C3) : C2$$

$$N_4 = Group([(1,3,2),(4,5,6),(2,3)(4,6),(1,4,2,6)(3,5)]) \cong (C3 \times C3) : C4$$