

The group G is isomorphic to the projective special linear group $\text{PSL}(3,2)$.

Ordinary character table of $G \cong \text{PSL}(3,2)$:

	1a	2a	3a	4a	7a	7b
χ_1	1	1	1	1	1	1
χ_2	3	-1	0	1	$E(7) + E(7)^2 + E(7)^4$	$E(7)^3 + E(7)^5 + E(7)^6$
χ_3	3	-1	0	1	$E(7)^3 + E(7)^5 + E(7)^6$	$E(7) + E(7)^2 + E(7)^4$
χ_4	6	2	0	0	-1	-1
χ_5	7	-1	1	-1	0	0
χ_6	8	0	-1	0	1	1

Trivial source character table of $G \cong \text{PSL}(3,2)$ 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	4a	7a	7b		1a	2a
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6$	9	1	1	2	2		0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	3	-1	1	$E(7) + E(7)^2 + E(7)^4$	$E(7)^3 + E(7)^5 + E(7)^6$		0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	3	-1	1	$E(7)^3 + E(7)^5 + E(7)^6$	$E(7) + E(7)^2 + E(7)^4$		0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	6	2	0	-1	-1		0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6$	15	-1	-1	1	1		0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	1	1	1	1	1		1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6$	7	-1	-1	0	0		1	-1

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

$$P_2 = \text{Group}([(2, 5, 7)(3, 4, 6)]) \cong \text{C}3$$

$$N_1 = \text{Group}([(2, 4)(3, 5), (1, 2, 3)(5, 6, 7)]) \cong \text{PSL}(3, 2)$$

$$N_2 = \text{Group}([(2, 5, 7)(3, 4, 6), (4, 6)(5, 7)]) \cong \text{S}3$$