

The group  $G$  is isomorphic to the group labelled by [ 720, 765 ] in the Small Groups library.

Ordinary character table of  $G \cong A6 . C2$ :

	1a	2a	3a	4a	4b	5a	8a	8b
$\chi_1$	1	1	1	1	1	1	1	1
$\chi_2$	1	1	1	1	-1	1	-1	-1
$\chi_3$	9	1	0	1	-1	-1	1	1
$\chi_4$	9	1	0	1	1	-1	-1	-1
$\chi_5$	10	2	1	-2	0	0	0	0
$\chi_6$	10	-2	1	0	0	0	$E(8) + E(8)^{\wedge} 3$	$-E(8) - E(8)^{\wedge} 3$
$\chi_7$	10	-2	1	0	0	0	$-E(8) - E(8)^{\wedge} 3$	$E(8) + E(8)^{\wedge} 3$
$\chi_8$	16	0	-2	0	0	1	0	0

Trivial source character table of  $G \cong A6 . C2$  at  $p = 3$

<i>Normalisers</i> $N_i$	$N_1$						$N_2$		$N_3$					
<i>p</i> - subgroups of $G$ up to conjugacy in $G$	$P_1$						$P_2$		$P_3$					
<i>Representatives</i> $n_j \in N_i$	1a	2a	4a	4b	5a	8a	8b	1a	2a	1a	2a	4b	4b	4a
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8$	27	3	-1	1	2	1	1	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8$	27	3	-1	-1	2	-1	-1	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8$	36	0	-2	0	1	$E(8) + E(8)^{\wedge} 3$	$-E(8) - E(8)^{\wedge} 3$	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8$	36	0	-2	0	1	$-E(8) - E(8)^{\wedge} 3$	$E(8) + E(8)^{\wedge} 3$	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8$	36	-4	0	0	1	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	9	1	1	1	-1	-1	-1	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	9	1	1	-1	-1	1	1	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	12	4	0	0	2	0	0	3	1	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8$	30	-2	-2	0	0	0	0	3	-1	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	10	2	-2	0	0	0	0	1	1	1	1	1	-1	-1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	10	2	-2	0	0	0	0	1	1	1	1	-1	1	-1
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8$	1	1	1	-1	1	-1	-1	1	1	1	1	-1	-1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8$	20	-4	0	0	0	0	0	2	-2	2	-2	0	0	0

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

$$P_2 = \text{Group}([(2, 9, 5)(3, 7, 8)(4, 6, 10)]) \cong C3$$

$$P_3 = \text{Group}([(2, 6, 7)(3, 5, 4)(8, 9, 10), (2, 10, 3)(4, 7, 9)(5, 6, 8)]) \cong C3 \times C3$$

$$N_1 = \text{Group}([(2, 3)(4, 6)(5, 7)(8, 9), (1, 2)(3, 4, 7, 9, 10, 8, 6, 5)]) \cong A6 . C2$$

$$N_2 = \text{Group}([(2, 10, 3)(4, 7, 9)(5, 6, 8), (3, 10)(4, 8)(5, 9)(6, 7), (2, 9, 5)(3, 7, 8)(4, 6, 10)]) \cong (C3 \times C3) : C2$$

$$N_3 = \text{Group}([(2, 6, 7)(3, 5, 4)(8, 9, 10), (3, 9, 10, 5)(4, 6, 8, 7), (2, 10, 3)(4, 7, 9)(5, 6, 8), (3, 10)(4, 8)(5, 9)(6, 7), (3, 4, 10, 8)(5, 6, 9, 7)]) \cong (C3 \times C3) : Q8$$