

The group  $G$  is isomorphic to the group labelled by [ 48, 30 ] in the Small Groups library.  
 Ordinary character table of  $G \cong A_4 : C_4$ :

	1a	4a	2a	3a	2b	4b	4c	6a	2c	4d
$\chi_1$	1	1	1	1	1	1	1	1	1	1
$\chi_2$	1	-1	1	1	1	-1	-1	1	1	-1
$\chi_3$	1	$-E(4)$	-1	1	1	$E(4)$	$-E(4)$	-1	-1	$E(4)$
$\chi_4$	1	$E(4)$	-1	1	1	$-E(4)$	$E(4)$	-1	-1	$-E(4)$
$\chi_5$	2	0	-2	-1	2	0	0	1	-2	0
$\chi_6$	2	0	2	-1	2	0	0	-1	2	0
$\chi_7$	3	-1	3	0	-1	-1	1	0	-1	1
$\chi_8$	3	1	3	0	-1	1	-1	0	-1	-1
$\chi_9$	3	$-E(4)$	-3	0	-1	$E(4)$	$E(4)$	0	1	$-E(4)$
$\chi_{10}$	3	$E(4)$	-3	0	-1	$-E(4)$	$E(4)$	0	1	$E(4)$

Trivial source character table of  $G \cong A_4 : C_4$  at  $p = 2$ :

Normalisers $N_i$	$N_1$	$N_2$	$N_3$	$N_4$	$N_5$	$N_6$	$N_7$	$N_8$	$N_9$	$N_{10}$	$N_{11}$	$N_{12}$	$N_{13}$
$p$ -subgroups of $G$ up to conjugacy in $G$	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$P_6$	$P_7$	$P_8$	$P_9$	$P_{10}$	$P_{11}$	$P_{12}$	$P_{13}$
Representatives $n_j \in N_i$	1a	3a	1a	1a	3a	1a	1a	3a	1a	1a	3a	1a	1a
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10}$	16	4	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10}$	16	-2	0	0	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 2 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10}$	24	0	8	0	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	8	2	0	8	2	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	8	-1	0	8	-1	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 2 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 2 \cdot \chi_9 + 2 \cdot \chi_{10}$	24	0	0	0	8	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	4	0	0	0	4	4	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	-2	4	0	0	4	-2	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 2 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	12	0	4	12	0	4	0	0	4	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 2 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	12	0	4	0	0	8	0	0	4	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	1	0	4	1	0	0	0	0	2	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10}$	12	0	0	0	4	0	0	0	0	2	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 2 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	2	2	2	2	2	2	0	0	2	2	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	2	-1	2	2	-1	2	2	0	0	2	-1	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	6	0	2	6	0	2	0	0	2	0	0	2	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	6	0	2	6	0	2	0	0	2	0	0	2	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	1	1	1	1	1	1	1	1	1	1	1	1

$P_1 = \text{Group}([()]) \cong 1$   
 $P_2 = \text{Group}([(1, 17)(2, 24)(3, 28)(4, 31)(5, 6)(7, 35)(8, 38)(9, 10)(11, 41)(12, 13)(14, 42)(15, 16)(18, 45)(19, 20)(21, 46)(22, 23)(25, 47)(26, 27)(29, 30)(32, 48)(33, 34)(36, 37)(39, 40)(43, 44)]) \cong C_2$   
 $P_3 = \text{Group}([(1, 3)(2, 7)(4, 11)(5, 12)(6, 13)(8, 18)(9, 19)(10, 20)(14, 25)(15, 26)(16, 27)(17, 28)(21, 32)(22, 33)(23, 34)(24, 35)(29, 39)(30, 40)(31, 41)(36, 43)(37, 44)(38, 45)(42, 47)(46, 48)]) \cong C_2$   
 $P_4 = \text{Group}([(1, 5)(2, 9)(3, 12)(4, 15)(6, 17)(7, 19)(8, 22)(10, 24)(11, 26)(13, 28)(14, 29)(16, 31)(18, 33)(20, 35)(21, 36)(23, 38)(25, 39)(27, 41)(30, 42)(32, 43)(34, 45)(37, 46)(40, 47)(44, 48), (1, 17)(2, 24)(3, 28)(4, 31)(5, 6)(7, 35)(8, 38)(9, 10)(11, 41)(12, 13)(14, 42)(15, 16)(18, 45)(19, 20)(21, 46)(22, 23)(25, 47)(26, 27)(29, 30)(32, 48)(33, 34)(36, 37)(39, 40)(43, 44)]) \cong C_2 \times C_2$   
 $P_5 = \text{Group}([(1, 2)(3, 5)(3, 17)(4, 21)(5, 13)(6, 12)(7, 24)(8, 25)(9, 26)(10, 27)(11, 28)(12, 29)(13, 30)(14, 31)(15, 32)(16, 33)(17, 34)(18, 35)(19, 36)(20, 37)(21, 38)(22, 39)(23, 40)(24, 31)(25, 32)(26, 33)(27, 34)(28, 35)(29, 36)(30, 37)(31, 38)(32, 39)(33, 30)(34, 31)(35, 32)(36, 33)(37, 34)(38, 35)(39, 36)(40, 37)(41, 38)(42, 39)(43, 40)(44, 41)(45, 42)(46, 43)(47, 48)]) \cong C_2 \times C_2$   
 $P_6 = \text{Group}([(1, 3)(2, 7)(4, 11)(5, 12)(6, 13)(8, 18)(9, 19)(10, 20)(14, 25)(15, 26)(16, 27)(17, 28)(21, 32)(23, 33)(24, 34)(25, 35)(26, 36)(27, 37)(28, 38)(29, 39)(30, 40)(31, 41)(32, 43)(33, 44)(34, 45)(35, 46)(36, 47)(37, 48)(38, 49)(39, 40)(41, 42)(43, 44)(44, 45)(45, 46)(46, 47)(47, 48)]) \cong C_2 \times C_2$   
 $P_7 = \text{Group}([(1, 2, 3, 7)(4, 21, 11, 32)(5, 10, 12, 20)(6, 9, 13, 19)(8, 25, 18, 14)(15, 37, 26, 44)(16, 36, 27, 43)(17, 24, 30, 37)(18, 33, 29, 34)(19, 36, 31, 35)(20, 39, 32, 36)(21, 42, 33, 37)(22, 45, 34, 38)(23, 48, 35, 39)(24, 51, 36, 40)(25, 54, 37, 41)(26, 57, 38, 42)(27, 60, 39, 43)(28, 63, 40, 44)(29, 66, 41, 45)(30, 69, 42, 46)(31, 72, 43, 47)(32, 75, 44, 48)(33, 78, 45, 49)(34, 81, 46, 50)(35, 84, 47, 51)(36, 87, 48, 52)(37, 90, 49, 53)(38, 93, 49, 54)(39, 96, 49, 55)(40, 99, 49, 56)(41, 102, 49, 57)(42, 105, 49, 58)(43, 108, 49, 59)(44, 111, 49, 60)(45, 114, 49, 61)(46, 117, 49, 62)(47, 120, 49, 63)(48, 123, 49, 64)(49, 126, 49, 65)(50, 129, 49, 66)(51, 132, 49, 67)(52, 135, 49, 68)(53, 138, 49, 69)(54, 141, 49, 70)(55, 144, 49, 71)(56, 147, 49, 72)(57, 150, 49, 73)(58, 153, 49, 74)(59, 156, 49, 75)(60, 159, 49, 76)(61, 162, 49, 77)(62, 165, 49, 78)(63, 168, 49, 79)(64, 171, 49, 80)(65, 174, 49, 81)(66, 177, 49, 82)(67, 180, 49, 83)(68, 183, 49, 84)(69, 186, 49, 85)(70, 189, 49, 86)(71, 192, 49, 87)(72, 195, 49, 88)(73, 198, 49, 89)(74, 201, 49, 90)(75, 204, 49, 91)(76, 207, 49, 92)(77, 210, 49, 93)(78, 213, 49, 94)(79, 216, 49, 95)(80, 219$