

The group  $G$  is isomorphic to the group labelled [ 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  $p = 3$ :

Normalisers $N_i$	$N_1$							$N_2$								
	$P_1$				$P_2$			$P_1$				$P_2$				
Representatives $n_j \in N_i$	1a	4a	2a	2b	4b	4c	2c	4d	1a	4a	2a	4b	1a	4a	2a	4b
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	-1	3	3	-1	-1	3	-1	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	1	3	3	1	1	3	1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	$E(4)$	-3	3	$-E(4)$	$E(4)$	-3	$-E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	$-E(4)$	-3	3	$E(4)$	$-E(4)$	-3	$E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	-1	3	-1	-1	1	-1	1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	1	3	-1	1	-1	-1	-1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	$-E(4)$	-3	-1	$E(4)$	$E(4)$	1	$-E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10}$	3	$E(4)$	-3	-1	$-E(4)$	$-E(4)$	1	$E(4)$	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	-1	1	1	-1	-1	1	-1	1	-1	1	-1	1	-1	1	-1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$E(4)$	-1	1	$-E(4)$	$E(4)$	-1	$-E(4)$	1	$E(4)$	-1	$-E(4)$	1	$E(4)$	-1	$-E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	$-E(4)$	-1	1	$E(4)$	$-E(4)$	-1	$E(4)$	1	$-E(4)$	-1	$E(4)$	1	$-E(4)$	-1	$E(4)$

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

$P_2 = \text{Group}([(1, 4, 2)(2, 8, 3)(4, 11, 5)(6, 10, 7)(8, 9, 12)(10, 13, 15)(17, 20, 22)(24, 26, 28)(27, 30, 32)(34, 36, 38)(39, 41, 43)(45, 47, 49)(51, 53, 55)(57, 59, 61)(63, 65, 67)(69, 71, 73)(75, 77, 79)(81, 83, 85)(87, 89, 91)(93, 95, 97)(99, 101, 103)(105, 107, 109)(111, 113, 115)(117, 119, 121)(123, 125, 127)(129, 131, 133)(135, 137, 139)(141, 143, 145)(147, 149, 151)(153, 155, 157)(159, 161, 163)(165, 167, 169)(171, 173, 175)(177, 179, 181)(183, 185, 187)(189, 191, 193)(195, 197, 199)(201, 203, 205)(207, 209, 211)(213, 215, 217)(219, 221, 223)(227, 229, 231)(233, 235, 237)(239, 241, 243)(245, 247, 249)(251, 253, 255)(257, 259, 261)(263, 265, 267)(269, 271, 273)(275, 277, 279)(281, 283, 285)(287, 289, 291)(293, 295, 297)(299, 301, 303)(305, 307, 309)(311, 313, 315)(317, 319, 321)(323, 325, 327)(329, 331, 333)(335, 337, 339)(341, 343, 345)(347, 349, 351)(353, 355, 357)(359, 361, 363)(365, 367, 369)(371, 373, 375)(377, 379, 381)(383, 385, 387)(389, 391, 393)(395, 397, 399)(401, 403, 405)(407, 409, 411)(413, 415, 417)(419, 421, 423)(427, 429, 431)(433, 435, 437)(439, 441, 443)(447, 449, 451)(453, 455, 457)(459, 461, 463)(465, 467, 469)(471, 473, 475)(477, 479, 481)(483, 485, 487)(489, 491, 493)(495, 497, 499)(501, 503, 505)(507, 509, 511)(513, 515, 517)(519, 521, 523)(527, 529, 531)(533, 535, 537)(539, 541, 543)(547, 549, 551)(553, 555, 557)(559, 561, 563)(565, 567, 569)(571, 573, 575)(577, 579, 581)(583, 585, 587)(589, 591, 593)(595, 597, 599)(601, 603, 605)(607, 609, 611)(613, 615, 617)(619, 621, 623)(627, 629, 631)(633, 635, 637)(639, 641, 643)(647, 649, 651)(653, 655, 657)(659, 661, 663)(665, 667, 669)(671, 673, 675)(677, 679, 681)(683, 685, 687)(689, 691, 693)(695, 697, 699)(701, 703, 705)(707, 709, 711)(713, 715, 717)(719, 721, 723)(727, 729, 731)(733, 735, 737)(739, 741, 743)(747, 749, 751)(753, 755, 757)(759, 761, 763)(765, 767, 769)(771, 773, 775)(777, 779, 781)(783, 785, 787)(789, 791, 793)(795, 797, 799)(801, 803, 805)(807, 809, 811)(813, 815, 817)(819, 821, 823)(827, 829, 831)(833, 835, 837)(839, 841, 843)(847, 849, 851)(853, 855, 857)(859, 861, 863)(865, 867, 869)(871, 873, 875)(877, 879, 881)(883, 885, 887)(889, 891, 893)(895, 897, 899)(901, 903, 905)(907, 909, 911)(913, 915, 917)(919, 911, 923)(927, 929, 931)(933, 935, 937)(939, 931, 943)(947, 949, 951)(953, 955, 957)(959, 951, 963)(965, 967, 969)(971, 973, 975)(977, 979, 981)(983, 985, 987)(989, 981, 991)] \cong C_3$

$N_1 = \text{Group}([(1, 2, 3, 7)(4, 21, 11, 32)(5, 10, 12, 20)(6, 9, 13, 19)(8, 25, 18, 14)(15, 37, 27, 44)(16, 36, 27, 43)(17, 24, 28, 35)(22, 40, 33, 30)(23, 39, 34, 29)(31, 46, 41, 48)(38, 47, 45, 42)(1, 3)(2, 7)(4, 11)(5, 12)(6, 13)(8, 18)(9, 19)(10, 20)(14, 25)(15, 26)(16, 27)(17, 28)(21, 32)(22, 33)(23, 34)(24, 35)(29, 39)(30, 40)(31, 41)(36, 43)(37, 44)(38, 45)(42, 47)(46, 48)(1, 4, 14)(2, 8, 21)(3, 11, 25)(5, 16, 42)(6, 31, 29)(7, 18, 32)(9, 23, 46)(10, 38, 36)(12, 27, 47)(13, 41, 39)(15, 30, 17)(16, 24, 37)(20, 45, 43)(22, 37, 24)(26, 40, 28)(33, 44, 35), (1, 5)(2, 9)($