Trivial source character table of $G \cong (C4 \times C4) : C2$ at p = 2: p-subgroups of G up to conjugacy in G $P_1 \mid P_2 \mid P_3 \mid P_4 \mid P_5 \mid P_6 \mid P_7 \mid P_8 \mid P_9 \mid P_{10} \mid P_{11} \mid P_{12} \mid P_{13} \mid P_{14} \mid P_{15} \mid P_{16} \mid P_{17} \mid P_{18} \mid P_{19} \mid P_{20} \mid P_{21} \mid P_{22} \mid P_{23} \mid P_{24} \mid P_{25} \mid P_{26} \mid P_{27} \mid P_{28} \mid P_{29} \mid P_{30} \mid P_{41} \mid P_{42} \mid P_{43} \mid P_{44} \mid P_{45} \mid P_{46} \mid P_{47} \mid P_{48} \mid P_{49} \mid P_{50} \mid P_{51} \mid P_{52} \mid P_{53} \mid P_{54} \mid P_{55} \mid P$ Representatives $n_i \in N_i$ $1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 8 + 8 + 8 + 8 + 9 + 9 + 9 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 8 + 8 + 8 + 9 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 8 + 8 + 8 + 9 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 8 + 8 \cdot \chi_{10} + 0 \cdot \chi_{10} + 0 \cdot \chi_{10} + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 8 + 8 \cdot \chi_{10} + 0 \cdot \chi_{10} + 0 \cdot \chi_{10} + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{10} +$ $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 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14} \begin{vmatrix} 8 & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & |$ $1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 & 4 \end{vmatrix} \begin{vmatrix} 4 & 4 & 4 & 4 \end{vmatrix} \end{vmatrix} \end{vmatrix}$ $1 \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} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14} \begin{vmatrix} 4 & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & | & 0 & |$ $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 4 + 0 + 0 + 4 + 2 + 0 + 0 + 2 + 0$ $|1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14}| \ 4 \ |0 \ |4 \ |0 \ |0 \ |0 \ |2 \ |2 \ |0 \ |0$ $\cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} \mid 2 \mid 2 \mid 2 \mid 2 \mid 2 \mid 2 \mid 0 \mid 2 \mid 0 \mid 2 \mid 0 \mid 2$

 $P_1 = Group([()]) \cong 1$ $P_2 = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,28)(18,29)(20,30)(23,31)(27,32)]) \cong C2$ $P_3 = Group([(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(20,21)(23,24)(27,28)]) \cong C2$ $P_4 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32)]) \cong C2$ $P_5 = Group([(1,32)(2,31)(3,30)(4,29)(5,28)(6,27)(7,26)(8,25)(9,24)(10,23)(11,22)(12,21)(13,20)(14,19)(15,18)(16,17)]) \cong C2$ $P_6 = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27)]) \cong C2$ $P_7 = Group([(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)]) \cong \mathbf{C2}$ $P_8 = Group([(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,26)(11,29)(12,28)(13,27)(14,22)(16,20)(17,25)(18,24)(19,23)]) \cong \mathbb{C}_2$ $P_{11} = Group([(1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32),(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,28)(18,29)(20,30)(23,31)(27,32)]) \cong C4$ $P_{14} = Group([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32),(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32)]) \cong C4$ $P_{28} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,26)(17,27)(19,29)(11,24)(17,26)(17,26)(17,27)(19,29)(17,26)(17,27)(19,29)(11,24)(17,26)$ $P_{34} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(23,31)(27,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,2$ $P_{35} = Group([(1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30,18)(9,27,10,28),(1,29)(2,25)(3,22)(4,27)(5,19)(6,18)(7,16)(2,22)(3,25)(4,27)(5,19)(6,18)(7,16)(2,22)(3,25)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(1,22)(1,23)$ $P_{36} = Group([(1,14,6,26)(2,20,10,30)(3,23,13,31)(4,16,15,5)(7,27,19,32)(8,22,21,9)(11,25,24,12)(17,29,28,18),(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23),(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,28)(18,29)(20,30)(23,31)(27,32)]) \\ \cong D_{36} = Group([(1,14,6,26)(2,20,10,30)(3,23,13,31)(4,16,15,5)(7,27,19,32)(8,22,21,9)(11,25,24,12)(17,29,28,18),(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(17,28)(17,2$ $P_{37} = Group([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32),(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27),(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32)]) \\ \cong D_{37} = Group([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32),(1,2)(13,29)(14,30)(16,22)(17,31)(19,25)(16,29)(17,27)(19,29)(17,2$ $P_{38} = Group([(1,13,5,25)(2,19,9,29)(3,16,12,6)(4,24,14,31)(7,22,18,10)(8,28,20,32)(11,26,23,15)(17,30,27,21),(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27),(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32)]) \\ \cong D_{38} = Group([(1,13,5,25)(2,19,9,29)(3,16,12,6)(4,24,14,31)(7,22,18,10)(8,28,20,32)(11,26,23,15)(17,30,27,21),(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(17,32)(17,3$ $P_{39} = Group([(1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32),(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23),(1,6)(2,10)(3,11,13,24)(5,14,16,26)(7,19,12,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23),(1,6)(2,10)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32),(1,18)(2,12)(3,11,13,24)(5,14,16,26)(7,19,12,23)(14,28)(15,27)(16,19)(17,26)(17,28)($ $P_{40} = Group([(1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32),(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27),(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,28)(18,29)(20,30)(23,31)(27,32)]) \\ \cong D_{80} = Group([(1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32),(1,2)(13,29)(14,30)(16,22)(17,31)(19,25)(14,26)(17,28)(18,29)(14,20)(17,28)(18,29)(17,28)(18,29)(18,2$ $P_{42} = Group([(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,26)(11,29)(12,28)(13,27)(14,22)(16,20)(17,25)(18,24)(19,23),\\ (1,13,5,25)(2,19,9,29)(3,16,12,6)(17,27)(19,29)(21,30)(24,31)(28,32)]) \cong D8$ $P_{43} = Group([(1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30,18)(9,27,10,28),(1,2)(3,28)(4,27)(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(20,21)(23,24)(27,28)]) \\ \cong D_{8} = Group([(1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30,18)(9,27,10,28),(1,23,24)(27,28)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27),(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(20,21)(23,24)(27,28)]) \\ \cong D_{8} = Group([(1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,20)(14,20)(1$ $P_{44} = Group([(1,23,16,24)(2,27,22,28)(3,4,25,26)(5,11,6,31)(7,8,29,30)(9,17,10,32)(12,14,13,15)(18,20,19,21),(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,13)(14,21)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27),(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(20,21)(23,24)(27,28)]) \\ \cong D_{8} = \frac{1}{2} \left(\frac{1}{$ $P_{45} = Group([(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,26)(11,29)(12,28)(13,27)(14,22)(16,20)(17,25)(18,24)(19,23),\\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32),\\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32),\\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(13,27)(14,22)(16,20)(17,27)(19,29)(13,27)(14,22)(16,20)(17,27)(19,29)(1$ $P_{46} = Group([(1,23,16,24)(2,27,22,28)(3,4,25,26)(5,11,6,31)(7,8,29,30)(9,17,10,32)(12,14,13,15)(18,20,19,21),(1,29)(2,25)(3,22)(4,27)(5,19)(6,18)(7,16)(2,22)(3,25)(4,27)(5,19)(6,18)(7,16)(2,22)(3,25)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(5,19)(6,18)(7,16)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(2,22)(3,23)(4,27)(6,18)(4,27)$

 $P_{47} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,3)(4,10)(5,30)(6,8)(7,31)(9,26)(11,29)(12,28)(13,27)(14,22)(16,20)(17,28)(13,27)(14,22)(16,20)(17,28)(13,27)(14,22)(16,20)(17,28)(18,24)(19,23)(19,24)(19,$ $P_{49} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,1,16,31)(2,17,22,32)(3,14,25,15)(4,13)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27)] \\ \cong C_2 \times D_8$ $P_{50} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(17,28)(13,24)(14,28)(15,27)(16,19)(17,26)(17,28)(18,29)(17,28)(18,29)(19,29)(11,24)(12,28)(12,28)(12,2$ $P_{51} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,4,6,15)(2,9)(3,12)(4,14)(6,16)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27)] \\ \cong C2 \times D8 + C_{10} + C_{10}$ $P_{52} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,30,32), \\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(12,$ $P_{53} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,11,16,31)(2,17,22,32)(3,14,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,11,16,31)(2,17,22,32)(3,14,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,11,16,31)(2,17,22,32)(3,14,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,11,16,31)(2,17,22,32)(3,14,25)(15,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(11,24)(12,25$ $P_{54} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(2,3)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(27,32), (1,2)(3,18)(4,21)(5,9)(3,12)(4,13)(13,25)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,30,32), (1,2)(3,18)(4,21)(5,9)(3,12)(4,13)(13,25)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,30,32),
(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,12)(17,28)(18,29)(19$ $N_1 = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32), \\ (1,4,6,15)(2,9,12,12)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32)(13,29)(14,26)(17,27)(19,29)(13,24)(13,29)(14,26)(17,27)(19,29)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(12,2$ $N_2 = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,3)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,3)(13,29)(14,30)(16,22)(17,31)(19,25)(16,20)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(11,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,25)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24)(12,24$ $N_3 = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,3)(4,13)(2,3)(13,29)(14,30)(16,22)(17,23)(13,29)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32)] \\ \cong (C_4 \times C_4) : C_2 \times C_4 \times C_4 : C_2 \times C_4 \times C_4 : C_4 \times C_4 \times$ $N_5 = Group([(1,32)(2,31)(3,30)(4,29)(5,28)(6,27)(7,26)(8,25)(9,24)(10,23)(11,22)(12,21)(13,20)(14,19)(15,18)(16,17), (1,6)(2,10)(3,13)(4,15)(5,16)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(20,21)(23,24)(27,28)] \\ \cong C_2 \times C_2 \times C_2 \times C_3 \times C_4 \times$ $N_7 = Group([(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(27,32)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(27,24)(12,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(17,24)(21,23)(17,24)(17,26)(20,24)(21,23)(17,24)(21,23)(21,23)(21,23)(21,23)(21,23)(21,23)(21,23)(21,23)(21,23)(21$ $N_8 = Group([(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,26)(11,29)(12,28)(13,27)(14,22)(16,20)(17,25)(18,24)(19,23), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\
(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(11,23$ $N_9 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,12)(8,29)(14,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(14,26)(17,27)(19,29)(14,30)(14,29)(14$ $N_{10} = Group([(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(13,29)(14,19)(15,18)(16,17), (1,2)(3,24)(27,28), (1,32)(2,31)(3,30)(4,29)(5,28)(24,27), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,29)(14,30)(14,19)(15,18)(16,17), (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,12)(12,21)(13,20)(14,19)(15,18)(16,17), (1,2)(12,21)(13,20)(14,19)(15,18)(16,17), (1,2)(12,21)(13,20)(14,19)(15,18)(16,17), (1,2)(12,21)(13,20)(14,19)(15,18)(16,17), (1,2)(12,21)(13,20)(14,19)(15,18)(16,17), (1,2)(16,19)(16,$ $N_{12} = Group([(1,14,6,26)(2,20,10,30)(3,23,13,31)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,29)(13,24)(12,25)(14,26)(14,25)(14,26)(14,25)(14,26)(14,25)(14,26)(14$ $N_{13} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)] \cong C2 \times D8$ $N_{14} = Groun([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32),
(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,25)(15,26)(17,27)(19,29)(13,25)(13$ $N_{16} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,32)(2,31)(3,30)(4,29)(5,28)(6,27)(7,26)(8,25)(9,24)(10,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,32)(2,31)(3,30)(4,29)(5,28)(6,27)(7,26)(8,25)(9,24)(10,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,32)(2,31)(3,30)(4,29)(5,28)(6,27)(7,26)(8,25)(9,24)(10,23)(11,22)(12,21)(13,20)(14,29)(12,21)(13,20)(14,29)(12,21)(13,20)(14,29)($ $N_{18} = Group([(1,23,16,24)(2,27,22,28)(3,4,25,26)(5,11,6,31)(7,8,29,30)(9,17,10,32)(12,14,13,15)(18,20,19,21)(1,14)(2,2)(3,24)(27,28)(14,26,31)(14,23)(14,23)(14,23)(1$ $N_{19} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,13)(13,29)(14,30)(16,22)(17,31)(19,25)(24,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,13)(13,29)(14,30)(16,22)(17,31)(19,25)(19,20)(19,22)(11,24)(19,25)(19,24)(19,22)(19,24)(19$ $N_{20} = Group([(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(20,21)(23,24)(27,28), \\ (1,7)(2,3)(4,28)(5,18)(6,19)(8,24)(9,12)(10,13)(14,21)(14,32)(15,17)(16,29)(20,31)(22,25)(23,30)(26,27)] \\ \cong C_{2} \times D_{3}(2,23)(2,23$ $N_{21} =
Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(16,19)(17,26)(20,24)(21,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(27,32)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(27,32)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(27,32)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)$ $N_{22} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), \\ (1,3)(4,10)(5,30)(4,10)(4,10)(4,10)(4,10)(4,10)(4,10)(4,10)(4,10)(4,10)(4,10)(4,10)(4$ $N_{23} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,20)(13,27)(14,22)(16,20)(17,25)(13,27)(14,22)(16,20)(17,25)(13,27)(14,22)(16,20)(17,25)(13,27)(14,22)(16,20)(17,25)(13,27)(14,22)(16,20)(17,25)(18,24)(19,23)(19,22)(11,24)(19,23)(19,24)$ $N_{24} = Group([(1,6)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)] \\ \cong C_2 \times D_8 + C_2 \times D_8 + C_3 \times D_8 +$ $N_{25} = Group([(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), (1,5)(2,9)(3,12)(4,14)(6,16)(7,12)(8,13)(14,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32), (1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30,18)(9,27,10,28)] \\ \cong C_2 \times D_3 = Group([(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,32)(18,19)(19,29)(11,31)(19,29$ $N_{26} = Group([(1,16)(2,22)(3,25)(4,26)(5,6)(7,29)(8,30)(9,10)(11,31)(12,13)(14,15)(17,26)(20,24)(21,23), \\ (1,18)(2,22)(3,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,24)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(4,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(2,23)(27,28), \\ (1,18)(27,28)(27,28), \\
(1,18)(27,28)(27,28), \\ (1,18)(2$ $N_{27} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(29,32)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(29,32)(11,23)(13,29)(14,20)(19,29)(11,23)(19,29)(11,23)(19,29)$ $N_{28} = Group([(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(16,22)(17,24)(17,26)(20,24)(21,23)(17,26)(20,24)(21,23)(17,26)(21,24)$ $N_{29} = Group([(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,20)(11,24)(12,25)(14,20)(13,25)(13,20)$ $N_{30} = Group([(1,32)(2,31)(3,30)(4,29)(5,28)(6,27)(7,26)(8,25)(9,24)(10,23)(13,29)(14,20)(13,29)(13,29)(14,20)(13,29)(14,29)(13,29)(14,29)(13,29)(14,29)(13,29)(14,29)(13,29)(14,29)$ $N_{31} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\
(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(11,23)(11,2$ $N_{32} = Group([(1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29)(15,24)(24,27),(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32),(1,5)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,32),(1,5)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,32),(1,5)(2,7,9,18)(4,11,14,23)(6,13,16,25)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,32),(1,5)(21,28,32)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,32),(1,5)(21,28,32)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,32),(1,5)(21,28,32)(15,26)(17,27)(19,29)(15,24,26,31)(21,28,32),(1,5)(21,28,32)(15,26)(17,27)(19,29)(15,24,26,31)(17,28,32),(17,28,28)(17,28$ $N_{33} = Group([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22)(21,30)(24,31)(28,32),(1,5)(2,9,13)(12,23)(13,23)(1$ $N_{34} = Group([(1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,23,30)(12,23,25,31)(18,27,29,32), (1,5)(2,9,03,12)(4,14)(6,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32), (1,5)(2,9,13)(19,22)(11,24)(12,25)(14,26)(17,27)(19,29)(11,24)(12,25)(14,26)(17,27)(19,29)(15,24,26,31)(21,28,32), (1,5)(2,13,12)(2,13,$ $N_{35} = Group([(1,29)(2,25)(3,22)(4,27)(5,19)(6,18)(7,16)(8,23)(9,13)(10,12)(11,20)(14,17)(15,32)(21,31)(24,30)(26,28), \\ (1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30,18)(9,27,10,28), \\
(1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30)(24,31$ $N_{36} = Group([(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23),\\ (1,46,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32)] \\ \cong C2 \times D8 + (1,16,16)(11,12)(11,$ $N_{37} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16)(2,10)(3,13)(4,15)(5,16)(7,19)(8,21)(9,22)(11,24)(12,25)(14,26)(17,28)(13,29)(14,26)(17,28)(13,29)(14,26)(17,28)(13,29)(14,26)(17,28)(13,29)(14,26)(17,28)(17,28)(17,$ $N_{38} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,23)(11,26,23,15)(17,30,27,21),(1,5)(2,9)(3,12)(4,14)(6,16)(7,12)(8,23)(11,26,23,15)(17,30,27,21),(1,5)(2,9)(3,12)(4,14)(6,16)(7,12)(8,23)(11,26,23,15)(17,20,27)(10,19,22)(11,20,23)(11,26,23,15)(17,20,27)(10,19,22)(11,20,23)(11,26,23,15)(17,20,27)(10,19,22)(11,20,23)(11,26,23,15)(17,20,27)(10,19,22)(11,20,23)(11,26,23,15)(17,20,27)(10,19,22)(11,20,23)(11,26,23,15)($ $N_{39} = Group([(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(8,31)(10,25)(11,30)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23), \\ (1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(27,32), \\
(1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(2,12)(21,23)(14,26)(17,27)(19,29)(21,30)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(14,26)(17,27)(19,29)(11,24)(12,23)(12$ $N_{40} = Group([1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,21)(1,2)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,4,6,15)(2,8,10,21)(3,11,13,24)(5,14,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,24)(12,25)(14,26)(17,27)(19,29)(21,30)(24,31)(28,32)(29,21)(29,20)(29,20)(29,21)(29,20)$ $N_{41} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,4,6,26)(2,20,10,30)(3,23,13,31)(4,16,16,26)(7,17,19,28)(9,20,22,30)(12,23,25,31)(18,27,29,32)] \\ \cong C2 \times D8 + C_{11}(11,21)(11,$ $N_{42} = Group([(1,13,5,25)(2,19,9,29)(3,16,12,6)(4,24,14,31)(7,22,18,10)(8,28,20,32)(11,26,23,15)(17,30,27,21),(1,30)(2,26)(3,28)(4,22)(5,21)(6,20)(7,24)(8,16)(9,15)(10,14)(11,19)(12,32)(13,17)(18,31)(23,29)(25,27),(1,21)(2,15)(3,32)(4,10)(5,30)(6,13,16,25)(8,17,20,27)(10,19,22,29)(15,24,26,31)(21,28,30,32)] \\ \cong C2 \times D8 + C_{10} +$ $N_{43} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), \\ (1,11,16,31)(2,17,22,32)(3,14,25,15)(4,13,26,12)(5,23,6,24)(7,20,29,21)(8,19,30)(14,20)(17,21)(19,29)(21,30)(24,31)(28,32)] \\ \cong C_2 \times D_{8}(1,11,12,12)(13,12$ $N_{44} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), (1,23,16,24)(27,28), (1,5)(2,9)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,25)(15,26)(17,27)(19,29)(21,30)(24,31)(28,32)] \\ \cong C_2 \times D_8 + C_1 + C_2 + C_2 + C_3 + C_3 + C_4 +$ $N_{45} = Group([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,(22,16,20)(7,24)(8,16)(9,12)(10,14)(11,19)(12,32)(13,17)(18,31)(23,29)(25,27), \\
(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,22)(11,24)(12,25)(14,26)(17,28)(13,27)(14,22)(16,20)(7,24)(8,16)(9,12)(12,28)(13,27)(14,22)(16,20)(17,28)(16,20)(17,28)(16,20)(17,28)(16,20)(17,28)(16,20)(17,28$ $N_{46} = Group([(1,29)(2,25)(3,22)(4,27)(5,19)(6,18)(7,16)(8,23)(9,13)(10,12)(11,20)(14,17)(15,32)(21,31)(24,30)(26,28), \\ (1,23,16,24)(2,27,22,28)(3,4,25,26)(5,11,6,31)(7,8,29,30)(9,17,10,32)(12,14,13,15)(18,20,19,21), \\ (1,23,16,24)(2,27,22,28)(3,4,25,26)(5,11,6,31)(7,8,29,30)(9,17,10,32)(12,14,13,15)(18,20,19,21), \\ (1,23,16,24)(2,27,22,28)(3,4,25,26)(5,11,6,31)(12,13)(14,15)(17,22)(13,24)(27,28)(17,27)(19,29)(21,30)(24,31)(24,$ $N_{47} = Group([(1,21)(2,15)(3,32)(4,10)(5,30)(6,8)(7,31)(9,25)(15,24)(13,25)(15,24)(13,25)(15,24)(13,25)(15,24)(13,25)(15,24)(13,25)(15,24)(13,25)(15,24)(13,25)(15,24)(13,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,24)(15,25)(15,25)(15,24)(15,25)$ $N_{48} = Group([(1,3,5,12)(2,7,9,18)(4,11,14,23)(6,13,16,25)(8,17,20,27)(10,19,22)(21,30)(24,31)(23,25,31)(18,27,29,32), \\ (1,5)(2,9)(3,12)(4,14)(6,16)(7,12)(8,12)(13,24)(13,2$ $N_{49} =
Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,21)(1,2)(13,29)(14,30)(16,22)(17,31)(19,25)(20,20)(13,29)(14,30)(16,22)(17,31)(19,25)(20,20)(15,24,26,31)(21,28)(21,29)(15,24,26,31)(21,28)(21,29)(15,24,26,31)(21,29)(21,29)(21,29)(21,29)(21,29)(21,29)(21,29)(21,29)(21,29)(21,29)(2$ $N_{50} = Group([(1,18)(2,12)(3,9)(4,32)(5,7)(6,29)(3,12)(4,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(13,22)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(14,28)(15,27)(16,19)(17,26)(20,24)(21,23)(16,29)(17,27)(16,19)(17,26)(20,24)(21,23)(16,29)(17,27)(16,19)(17,26)(20,24)(21,23)(16,29)(17,27)(16,19)(17,26)(20,24)(21,23)(16,29)(17,27)(17,29)($

 $N_{51} = Group([(1,2)(3,18)(4,21)(5,9)(6,10)(7,12)(8,15)(11,32)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), (1,4,6,15)(2,8,10,21)(3,12)(4,14)(6,16)(7,18)(8,20)(10,22)(11,23)(13,29)(14,30)(16,22)(17,31)(19,25)(20,26)(23,28)(24,27), (1,4,6,15)(2,8,10,21)(21,28)(13,29)(14,20)($