$P_2 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48)]) \cong C2$  $P_3 = Group([(1,4)(2,8)(3,11)(5,14)(6,15)(7,18)(9,21)(10,22)(12,25)(13,26)(16,29)(17,30)(19,32)(20,33)(23,36)(24,37)(27,39)(28,40)(31,42)(34,43)(35,44)(38,46)(41,47)(45,48)]) \cong C2$  $P_4 = Group([(1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(16,38)(18,25)(20,28)(22,42)(23,31)(26,48)(27,45)(29,37)(30,36)(33,47)(34,41)(39,44)(40,43)]) \cong C2$  $P_5 = Group([(1,32)(2,25)(3,8)(4,7)(5,18)(6,48)(9,11)(10,47)(12,21)(13,37)(14,19)(15,35)(16,44)(17,43)(20,30)(22,28)(23,40)(24,39)(26,38)(27,46)(29,45)(31,33)(34,42)(36,41)]) \cong C_2(3,32)(3,3$ 

Ordinary character table of  $G \cong (C12 \times C2) : C2$ :

| This is a source share stan table of $C \simeq (C12 + C2) \cdot C2$ at $x = 2$ .   |   |   |                                   |                   |   |   |   |   |  |  |  |   |  |   |  |     |  |  |
|--|---|---|-----------------------------------|-------------------|---|---|---|---|--|--|--|---|--|---|--|-----|--|--|
| Trivial source character table of $G \cong (C12 \times C2) : C2$ at $p = 2$ :  Normalisers $N_i$   | $N_1$   | $N_2$   |                                   | $N_3$             |   | $N_4$ $N_5$   | $N_6$   | $N_7$   | $N_8$  | N <sub>o</sub>   | $N_{10}$ $N_{10}$                      | $V_{11}   N_{12}$   | N <sub>10</sub>                        | $N_{14} \mid N_{15}$                                      | $N_{16}$   |     | $N_{18} \mid N_{19}$                                   | Noo                                    |
| p-subgroups of $G$ up to conjugacy in $G$  | $P_1$   | $\frac{P_2}{P_2}$   |                                   | $\frac{R_3}{P_3}$ |   | $P_4$ $P_5$   |   | $P_7$   | $P_8$  |  |  | $P_{11}   P_{12}  $   |  | $P_{14}$ $P_{15}$   |  |     | $\frac{P_{18}}{P_{18}}   P_{19}$                       |  |
| Representatives $n_j \in N_i$  | 1a  3a  | 1a  3a  | 1a                                | $\frac{1}{3b}$    | 3a                                      |   | 1a 3a   |   | $\frac{1}{a}$ $\frac{1}{1a}$ $\frac{3}{3}$             |  |  | $\frac{11}{1a}$ $\frac{1}{1a}$  |  | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$     |  |     |  | $\frac{a}{a}$ $\frac{1}{1a}$           |
| $\frac{1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 2 \cdot \chi_{13} + 2 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 2 \cdot \chi_{13} + 2 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}$  |   |   |                                   | 0                 | 0                                       | 0 0   | 0 0   | -   |  |  |  | 0 0   | 0                                      | 0 0   |  |     | 0 0  |  |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 1 \cdot \chi_{16} + 1 \cdot \chi_{17} + 1 \cdot \chi_{18}$   | 16 - 8  |   |                                   | 0                 | 0                                       | 0  0  | 0 0   | 0 0   | 0 (  | 0 0  | 0                                      | 0 0   | 0                                      | 0 0   | 0 0  | 0   | 0  0   | 0                                      |
| $1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 8 8   | 8 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                                      |
| $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$  | 8 -4  | 8 -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                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   |   | 0 0   |                                   | 4                 | 4                                       | 0 0   | 0 0   | 0 0   | 0 (  | 0 0  | 0                                      | 0 0   | 0                                      | 0 0   | 0 0  | 0   | 0 0  | 0                                      |
|  |   |   | 4                                 | ( )               | 4 * E(3)                                | 0  0  | 0 0   | 0 0   | 0 (  | $0 \mid 0$   | "                                      | 0     0   | 0                                      | 0  0  | 0 0  | 0   | 0     0  | 0                                      |
| $0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16} + 1 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 8 -4  |   |                                   |                   | $4 * E(3)^2$                            | 0 0   | 0 0   | 0 0   | 0 (  | 0 0  | 0                                      | 0 0   | 0                                      | 0 0   | 0 0  | 0   | 0  0   | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 8 8   | 0 0   |                                   | 0                 | 0                                       | $\begin{array}{c c} 4 & 0 \\ \hline \end{array}$          | 0  0  | 0 0   | -  | 0  0   | 0                                      | $\frac{0}{0}$   | 0                                      | $\begin{array}{c c} 0 & 0 \\ \hline \end{array}$          | 0 0  | 0   | 0  0   | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 8 8   | 0 0   | + -                               | 0                 | 0                                       | $\begin{array}{c c} 0 & 4 \\ \hline 0 & 0 \end{array}$    | 0 0   | 0 0   |  | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$ | 0                                      | $\frac{0}{0}$   | 0                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \\ \end{array}$ | $\frac{0}{0}$  | 0   | 0  0   | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | $\begin{bmatrix} 4 & 4 \\ 4 & 3 \end{bmatrix}$        | $\begin{bmatrix} 4 & 4 \\ 4 & 2 \end{bmatrix}$  |                                   | 4                 | $\begin{bmatrix} 4 \\ -2 \end{bmatrix}$ | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$            | $\begin{bmatrix} 4 & 4 \\ 4 & 2 \end{bmatrix}$        | 0 0   | 0 0  | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$                 | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$ | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$                                      |  | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$            | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$         |     | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$         |  |
| $\frac{0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_9 + 0 \cdot \chi_9 + 1 \cdot \chi_9 + 0 \cdot \chi_9 + 1 \cdot \chi_9 + 0 \cdot \chi_{19} + 0 \cdot \chi$  | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | $\begin{array}{ c c c c } \hline 4 & -2 \\ \hline \hline 4 & 4 \\ \hline \end{array}$ | _                                 | $\frac{-2}{0}$    | $\frac{-2}{0}$                          | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$    | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 4 4   | 0 (  | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$ | -                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$                      | 0                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$    |  | 0   | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$ | 0                                      |
| $\begin{vmatrix} 1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \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} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 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 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 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 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 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 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 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 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 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 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 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 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ 0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot$   | $\begin{bmatrix} 4 & 4 \\ 4 & -2 \end{bmatrix}$       | $\begin{vmatrix} 4 & 4 \\ 4 & -2 \end{vmatrix}$                                       |                                   | 0                 | 0                                       | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$            |   | $\begin{bmatrix} 4 & 4 \\ 4 & -2 \end{bmatrix}$ |  | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$                 |  | $\begin{bmatrix} 0 \\ 0 \end{bmatrix} \begin{bmatrix} 0 \\ 0 \end{bmatrix}$ |  | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$            | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$         |     | $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$         |  |
| $\frac{1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}$  | 4 4   | 4 4   | 0                                 | 0                 | 0                                       | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$    | 0 0   | 0 0   | 4 4  |  | 0                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$                      | 0                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$    |  | 0   | $\frac{0}{0}$  | 0                                      |
| $\begin{vmatrix} 0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} \\ \end{vmatrix}$  | $\begin{vmatrix} 1 & -2 \end{vmatrix}$                | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$                                 | $\begin{bmatrix} 0 \end{bmatrix}$ | 0                 | 0                                       | 0  0  | $\begin{vmatrix} 0 & 0 \end{vmatrix}$                 | 0 0   | 4 -  | $-2 \mid 0$  | 0                                      | 0  0  | 0                                      | 0  0  | $\begin{bmatrix} 0 & 0 \end{bmatrix}$                  | 0   | 0  0   | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 4 4   | 4 4   | 0                                 | 0                 | 0                                       | 4 0   | 0 0   | 0 0   | 0 (  | 0 4  | 0                                      | 0 0   | 0                                      | 0 0   | 0 0  | 0   | 0 0  | 0                                      |
| $1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 4 4   | 4 4   | 0                                 | 0                 | 0                                       | 0 0   | 0 0   | 0 0   | 0 (  | 0 0  | 4                                      | 0 0   | 0                                      | 0 0   | 0 0  | 0   | 0 0  | 0                                      |
| $1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   | 4 4   | 4 4   | 0                                 | 0                 | 0                                       | 0 0   | 0 0   | 0 0   | 0 (  | 0 0  | 0                                      | 4 0   |  |   | 0 0  |     | 0 0  | 0                                      |
| $\boxed{1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}$   | 4 4   | 4 4   | 0                                 | 0                 | 0                                       | 0 4   | 0 0   | 0 0   | 0 (  | 0 0  | 0                                      | 0 4   | 0                                      | 0 0   | 0 0  | 0   | 0 0  | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   |   |   |                                   | 0                 | 0                                       | 2 0   | 0 0   | 2 2   | 0 (  |  |  | 2 0   | 2                                      | 0 0   | 0 0  | 0   | 0 0  | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   |   |   |                                   | 2                 | 2                                       | 2 0   |   |   | 0 (  |  |  | 0 0   |  |   | 0 0  |     | 0 0  | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   |   |   | _                                 | 0                 | 0                                       |   | 0 0   |   |  |  |  | 0 2   |  |   | 0 0  |     | 0  0   | 0                                      |
| $1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}$   |   |   |                                   | 2                 | 2                                       |   | $\begin{vmatrix} 2 & 2 \\ 2 & 1 \end{vmatrix}$        |   |  |  | 1 1                                    |   | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$ | _   | $\begin{vmatrix} 2 & 2 \\ 2 & 1 \end{vmatrix}$         | 1 1 | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$                 | $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$ |
| $\frac{0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}$   |   |   |                                   | $\frac{-1}{0}$    | -1                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 2 \end{array}$    | $\begin{vmatrix} 2 & -1 \\ 0 & 0 \end{vmatrix}$       |   |  | _  |  | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 2 \end{array}$                      | 0                                      | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \\ \end{array}$ | -  |     | 0  0   | 0                                      |
| $\frac{1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_$ |   |   |                                   | 0                 | 0                                       |   | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | +   | 0 (  |  |  |   |  |   | 0  0   |     |  | 0                                      |
| $\frac{1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}$  |   |   |                                   | 0                 | 0                                       | $\begin{array}{c c} 0 & 2 \\ \hline 0 & 0 \end{array}$    | $\begin{vmatrix} 2 & 2 \\ 0 & 0 \end{vmatrix}$        |   | $\begin{array}{c c} 0 & 0 \\ \hline 2 & 2 \end{array}$ | _  |  | $\begin{array}{c c} 2 & 2 \\ \hline 2 & 0 \end{array}$                      |  |   | $\begin{array}{c c} 0 & 0 \\ \hline 0 & 0 \end{array}$ |     | $\begin{array}{c c} 2 & 0 \\ \hline 0 & 2 \end{array}$ | 0                                      |
| $\frac{1 \cdot \chi_{1} + 1 \cdot \chi_{2} + 0 \cdot \chi_{3} + 0 \cdot \chi_{4} + 0 \cdot \chi_{5} + 0 \cdot \chi_{6} + 0 \cdot \chi_{7} + 0 \cdot \chi_{8} + 0 \cdot \chi_{9} + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}{1 \cdot \chi_{1} + 0 \cdot \chi_{2} + 0 \cdot \chi_{3} + 0 \cdot \chi_{4} + 0 \cdot \chi_{5} + 0 \cdot \chi_{6} + 0 \cdot \chi_{7} + 0 \cdot \chi_{8} + 0 \cdot \chi_{9} + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18}}$  |   |   |                                   | 1                 | 1                                       | $\begin{array}{c cccc} 0 & 0 \\ \hline 1 & 1 \end{array}$ | <del> </del>  | 1 1   | 1 1  |  | $\frac{2}{1}$                          | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$                       | -                                      |   |  |     | $\begin{array}{c c} 0 & 2 \\ \hline 1 & 1 \end{array}$ | 1                                      |
| $\frac{1}{2} + \frac{1}{2} + \frac{1}$   | 1 1   | 1 1   | 1                                 |                   | 1                                       | 1 1   | 1 1   | 1 1   | 1 -  | .   1  |  |   | 1                                      |   |  |     |  |  |

| $P_6 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,4)(2,8)(3,11)(5,14)(6,15)(7,18)(9,21)(10,22)(12,25)(13,26)(16,29)(17,31)(18,32)(20,34)(23,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,4)(2,8)(31,14)(44,48)(14,47)(45,48)]) \\ \cong C2 \times C2$  |
|--|
| $P_7 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,18,21,32)(10,20,33,36,43)(24,35,38,45)(30,40,42,47)(37,44,46,48)]) \cong C4$   |
| $P_8 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,48)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(2,18,9,32)(3,14,12,4)(6,26,16,39)(7,21,19,8)(10,33,23,43)(13,29,27,15)(17,40,31,47)(20,36,34,22)(24,44,38,48)(28,42,41,30)(35,46,45,37)]) \cong C4$   |
| $P_9 = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(16,38)(18,25)(20,28)(22,42)(23,31)(26,48)(27,45)(29,37)(30,36)(33,47)(34,41)(39,44)(40,43)]) \\ \cong C2 \times C2$  |
| $P_{10} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,21,5,8)(2,14,9,4)(3,32,12,18)(6,46,16,37)(7,25,19,11)(10,42,23,30)(13,48,27,44)(15,24,29,38)(17,36,31,22)(20,47,34,40)(26,35,39,45)(28,43,41,33)]) \cong C4$  |
| $P_{11} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(10,28,23,41)(13,38,27,24)(15,48,29,44)(17,20,31,34)(22,47,36,40)(26,37,39,46)(30,43,42,33)]) \cong C4$  |
| $P_{12} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,32)(2,25)(3,8)(4,7)(5,18)(6,48)(9,11)(10,47)(12,21)(13,37)(14,19)(15,35)(16,44)(17,43)(20,30)(22,28)(23,40)(24,39)(26,38)(27,46)(29,45)(31,33)(34,42)(36,41)]) \\ \cong C2 \times C2$   |
| $P_{13} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,18,21,32)(10,20,33,36,43)(24,35,38,45)(30,40,42,47)(37,44,46,48), (1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(24,35,38,45)(30,40,42,47)(37,44,46,48), (1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(24,35,38,45)(30,40,42,47)(37,44,46,48), (1,2)(37,44)(40,43)(40,43)(40,4$ |
| $P_{14} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(16,29)(17,30)(19,32)(20,33)(23,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(16,29)(17,30)(19,32)(20,33)(23,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,2)(37,46)(40,47)$ |
| $P_{15} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,44)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(2,18,9,32)(3,14,12,4)(6,26,16,39)(7,21,19,8)(10,33,23,43)(13,29,27,15)(17,40,31,47)(20,36,34,22)(24,44,38,48)(28,42,41,30)(35,46,45,37), (1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(16,38)(18,25)(20,34)(22,36)(24,44)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(2,36)(24,34)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(2,36)(24,34)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(2,36)(24,34)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)(40,47)(44,48), (1,11,5,25)(23,34)(24,34)(35,45)(37,46)$ |
| $P_{16} = Group([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,18,21,32)(10,20,33)(23,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,18,21,32)(10,20,33)(23,36)(24,37)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(40,47)(44,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,46)(47,47)(47,48), (1,3,5,12)(27,39)(28,41)(30,42)(37,48)(37,4$ |
| $P_{17} = Grow([(1,5)(2,9)(3,12)(4,14)(6,16)(7,19)(8,21)(10,23)(11,25)(13,27)(15,29)(17,31)(18,32)(20,34)(22,36)(24,38)(26,39)(28,41)(30,42)(33,43)(35,45)(37,46)(40,47)(44,48), (1,3,5,12)(2,3,3)(15,26,29,39)(17,28,31,41)(22,33,36,43)(24,35,38,45)(30,42,47)(37,44,46,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,13,21)(10,20,23,34)(15,26,29,39)(17,28,31,41)(22,33,36,43)(24,35,38,45)(30,40,42,47)(37,46,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,13,21)(10,20,23,34)(15,26,29,39)(17,28,31,41)(22,33,36,43)(24,35,38,45)(30,40,42,47)(37,46,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,13,21)(10,20,23,34)(15,26,29,39)(17,28,31,41)(22,33,36,43)(24,35,38,45)(30,40,42,47)(37,46,48), (1,3,5,12)(27,48,46)(27,4$ |

 $P_{20} = Group([1,5)(2,9)(3,12)(4,14)(6,15)(7,18)(9,2)(15,24)(1$  $N_1 = Group([1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,23)(11,25)(13,26)(14,24)(23,34)(24,35)(24,$ 

 $N_3 = Group([(1,4)(2,8)(3,11)(5,14)(6,15)(7,18)(9,21)(10,22)(12,25)(13,26)(15,24)(24,37)(27,39)(28,40)(31,42)(34,43)(35,44)(38,46)(41,47)(45,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,18,21,32)(10,22,33,36,43)(12,36,36)(24,37)(27,39)(28,40)(31,42)(34,43)(35,44)(38,46)(41,47)(45,48), (1,3,5,12)(2,7,9,19)(4,11,14,25)(6,13,16,27)(8,18,21,32)(10,22,33,36,43)(12,36,36)(24,37)(27,39)(28,40)(31,42)(34,43)(35,44)(38,46)(41,47)(45,48), (1,3,5,12)(27,39)(48,43)(11,40,26)(12,41,27)(14,42,29)(18,44,33)(19,45,34)(21,46,36)(25,47,39)(28,40)(31,42)(34,43)(35,44)(38,46)(41,47)(45,48), (1,3,5,12)(27,39)(48,43)(19,45,34)(19,4$  $N_{A} = Group([(1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,19)(13,35)(15,46)(16,24)(27,35)(28,34)(29,47)(37,44,46,48), (1,9)(2,33,36,43)(24,35,38,45)(30,40,42,47)(37,44,46,48), (1,9)(37,44,46,48)$ 

 $|\chi_4|$  1 -1 1 -1 1 -1 1 -1 1 1 1 1 1  $|\chi_5|$  1 -1 1 1 1 -1 -1 1 1 1 1 1 -1 -1  $|\chi_7|$  1 1 -1 1 1 1 -1 1 -1 -1 1 1 1 -1  $|\chi_8|$  1 1 1 -1 1 1 -1 -1 1 1 -1 -1 1 1 -1  $|\chi_9|$  2 0 -2 -2 2 -1 0 0 2 -2 1 1 -1 0  $|\chi_{10}|$  2 0 -2 2 2 -1 0 0 -2 -2 1 -1 0 

 $\begin{vmatrix} \chi_{14} \end{vmatrix} = 2 \quad 0 \quad 2*E(4) \quad 0 \quad -2 \quad 2 \quad 0 \quad 0 \quad 0 \quad -2*E(4) \quad 2*E(4) \quad 0 \quad -2 \quad 0 \quad 0 \quad -2*E(4)$ 

 $|\chi_{18}|$  2 0 2 \* E(4) 0 -2 -1 0 0 0 -2 \* E(4) -E(4) E(3) - E(3)^2 1 0 E(12)^7 - E(12)^{11} E(4) - E(3) + E(3)^2 - E(12)^7 + E(12)^{11}

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

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

 $I_{10} = Group([(1,21,5,8)(2,14,9,4)(3,32,12,18)(6,43)(24,33)(24,34)(35,45)(24,43)(24,34)(35,45)(24,43)(24,34)(35,45)(24,43)(24,34)(35,45)(24,43)(24,34)(35,45)(24,43)(24,34)(35,45)(24,43)(35,45)(24,43)(2$ 

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

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

 $=Group([(1,21,5,8)(2,14,9,4)(3,32,12,18)(6,46)(1,32)(24,44,38,48)(28,42,41,30)(35,46)(49,42)(24,44,38,48)(28,42,41,30)(35,46)(49,42)(24,44,38,48)(28,42,41,30)(35,45)(29,37)(30,36)(33,47)(34,41)(39,44)(40,43)] \\ \cong (C4 \times C2): C2 \times (C4 \times C2): C3 \times (C4 \times C2): C4 \times (C4 \times C4): C4 \times (C4 \times C$  $V_{20} = Group([(1,2)(3,7)(4,21)(5,9)(6,24)(8,14)(10,17)(11,32)(12,31)(13,24)(13,41)(22,33,36,43)(24,37)(23,34)(13,24)(23,34)(13,24)(23,34)(24,35)(24,37)(25,34)(24,35)(24,37)(25,34)($