# A5

| subset | type | single cell | free | orbit basis |
|--------|------|-------------|------|-------------|
| {} | | CHAMBER | (FREE) | (YES) |
| {1} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {2} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {3} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {4} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {5} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {1, 2} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {2, 3} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {3, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {4, 5} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 4} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 4} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 4, 5} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 4, 5} | $A_5$ | CHAMBER | (FREE) | (YES) |
| {1, 3} | $A_1 \times A_1$ | no | FREE | no |
| {1, 4} | $A_1 \times A_1$ | no | FREE | no |
| {1, 5} | $A_1 \times A_1$ | no | FREE | no |
| {2, 4} | $A_1 \times A_1$ | no | FREE | no |
| {2, 5} | $A_1 \times A_1$ | no | FREE | no |
| {3, 5} | $A_1 \times A_1$ | no | FREE | no |
| {1, 2, 4} | $A_1 \times A_2$ | no | FREE | no |
| {1, 2, 5} | $A_1 \times A_2$ | no | FREE | no |
| {1, 3, 4} | $A_1 \times A_2$ | no | FREE | no |
| {1, 4, 5} | $A_1 \times A_2$ | no | FREE | no |
| {2, 3, 5} | $A_1 \times A_2$ | no | FREE | no |
| {2, 4, 5} | $A_1 \times A_2$ | no | FREE | no |
| {1, 2, 3, 5} | $A_1 \times A_3$ | no | no | (no) |
| {1, 3, 4, 5} | $A_1 \times A_3$ | no | no | (no) |
| {1, 2, 4, 5} | $A_2 \times A_2$ | no | FREE | no |
| {1, 3, 5} | $A_1 \times A_1 \times A_1$ | no | no | (no) |

# B5

| subset | type | single cell | free | orbit basis |
|---|---|---|---|---|
| $\{\}$ | | CHAMBER | (FREE) | (YES) |
| $\{1\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{2\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{3\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{4\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{5\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{1,2\}$ | $A_2$ | CHAMBER | (FREE) | (YES) |
| $\{2,3\}$ | $A_2$ | CHAMBER | (FREE) | (YES) |
| $\{3,4\}$ | $A_2$ | CHAMBER | (FREE) | (YES) |
| $\{1,2,3\}$ | $A_3$ | CHAMBER | (FREE) | (YES) |
| $\{2,3,4\}$ | $A_3$ | CHAMBER | (FREE) | (YES) |
| $\{1,2,3,4\}$ | $A_4$ | CHAMBER | (FREE) | (YES) |
| $\{4,5\}$ | $B_2$ | CHAMBER | (FREE) | (YES) |
| $\{3,4,5\}$ | $B_3$ | CHAMBER | (FREE) | (YES) |
| $\{2,3,4,5\}$ | $B_4$ | CHAMBER | (FREE) | (YES) |
| $\{1,2,3,4,5\}$ | $B_5$ | CHAMBER | (FREE) | (YES) |
| $\{1,3\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{1,4\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{1,5\}$ | $A_1 \times A_1$ | no | FREE | YES |
| $\{2,4\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{2,5\}$ | $A_1 \times A_1$ | no | FREE | YES |
| $\{3,5\}$ | $A_1 \times A_1$ | no | FREE | YES |
| $\{1,2,4\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,2,5\}$ | $A_1 \times A_2$ | no | FREE | YES |
| $\{1,3,4\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,3,5\}$ | $A_1 \times A_2$ | no | FREE | YES |
| $\{1,2,3,5\}$ | $A_1 \times A_3$ | no | no | (YES) |
| $\{1,4,5\}$ | $A_1 \times B_2$ | no | FREE | no |
| $\{2,4,5\}$ | $A_1 \times B_2$ | no | FREE | no |
| $\{1,3,4,5\}$ | $A_1 \times B_3$ | no | no | (no) |
| $\{1,2,4,5\}$ | $A_2 \times B_2$ | no | FREE | no |
| $\{1,3,5\}$ | $A_1 \times A_1 \times A_1$ | no | no | (no) |

2

# C5

| subset | type | single cell | free | orbit basis |
|---|---|---|---|---|
| $\{\}$ | | CHAMBER | (FREE) | (YES) |
| $\{1\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{2\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{3\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{4\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{5\}$ | $A_1$ | CHAMBER | (FREE) | (YES) |
| $\{1,2\}$ | $A_2$ | CHAMBER | (FREE) | (YES) |
| $\{2,3\}$ | $A_2$ | CHAMBER | (FREE) | (YES) |
| $\{3,4\}$ | $A_2$ | CHAMBER | (FREE) | (YES) |
| $\{1,2,3\}$ | $A_3$ | CHAMBER | (FREE) | (YES) |
| $\{2,3,4\}$ | $A_3$ | CHAMBER | (FREE) | (YES) |
| $\{1,2,3,4\}$ | $A_4$ | CHAMBER | (FREE) | (YES) |
| $\{4,5\}$ | $B_2$ | CHAMBER | (FREE) | (YES) |
| $\{3,4,5\}$ | $C_3$ | CHAMBER | (FREE) | (YES) |
| $\{2,3,4,5\}$ | $C_4$ | CHAMBER | (FREE) | (YES) |
| $\{1,2,3,4,5\}$ | $C_5$ | CHAMBER | (FREE) | (YES) |
| $\{1,3\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{1,4\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{1,5\}$ | $A_1 \times A_1$ | no | FREE | YES |
| $\{2,4\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{2,5\}$ | $A_1 \times A_1$ | no | FREE | YES |
| $\{3,5\}$ | $A_1 \times A_1$ | no | FREE | YES |
| $\{1,2,4\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,2,5\}$ | $A_1 \times A_2$ | no | FREE | YES |
| $\{1,3,4\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,3,5\}$ | $A_1 \times A_2$ | no | FREE | YES |
| $\{1,2,3,5\}$ | $A_1 \times A_3$ | no | FREE | YES |
| $\{1,4,5\}$ | $A_1 \times B_2$ | no | FREE | no |
| $\{2,4,5\}$ | $A_1 \times B_2$ | no | FREE | no |
| $\{1,3,4,5\}$ | $A_1 \times C_3$ | no | FREE | no |
| $\{1,2,4,5\}$ | $A_2 \times B_2$ | no | FREE | no |
| $\{1,3,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |

# D5

| subset | type | single cell | free | orbit basis |
|---|---|---|---|---|
| {} | | CHAMBER | (FREE) | (YES) |
| {1} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {2} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {3} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {4} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {5} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {1, 2} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {2, 3} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {3, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {3, 5} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 4} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 4} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 5} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 4, 5} | $D_4$ | no | no | (no) |
| {1, 2, 3, 4, 5} | $D_5$ | CHAMBER | (FREE) | (YES) |
| {1, 3} | $A_1 \times A_1$ | no | FREE | no |
| {1, 4} | $A_1 \times A_1$ | no | FREE | no |
| {1, 5} | $A_1 \times A_1$ | no | FREE | no |
| {2, 4} | $A_1 \times A_1$ | no | FREE | no |
| {2, 5} | $A_1 \times A_1$ | no | FREE | no |
| {4, 5} | $A_1 \times A_1$ | no | no | (no) |
| {1, 2, 4} | $A_1 \times A_2$ | no | FREE | no |
| {1, 2, 5} | $A_1 \times A_2$ | no | FREE | no |
| {1, 3, 4} | $A_1 \times A_2$ | no | FREE | no |
| {1, 3, 5} | $A_1 \times A_2$ | no | FREE | no |
| {1, 3, 4, 5} | $A_1 \times A_3$ | no | FREE | no |
| {1, 4, 5} | $A_1 \times A_1 \times A_1$ | no | no | (no) |
| {2, 4, 5} | $A_1 \times A_1 \times A_1$ | no | no | (no) |
| {1, 2, 4, 5} | $A_1 \times A_1 \times A_2$ | no | no | (no) |

## G2

| subset | type | single cell | free | orbit basis |
|---|---|---|---|---|
| {} | | CHAMBER | (FREE) | (YES) |
| {1} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {2} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {1, 2} | $G_2$ | CHAMBER | (FREE) | (YES) |

## F4

| subset | type | single cell | free | orbit basis |
|---|---|---|---|---|
| {} | | CHAMBER | (FREE) | (YES) |
| {1} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {2} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {3} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {4} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {1, 2} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {3, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {2, 3} | $B_2$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3} | $B_3$ | no | FREE | YES |
| {2, 3, 4} | $C_3$ | no | no | (YES) |
| {1, 2, 3, 4} | $F_4$ | CHAMBER | (FREE) | (YES) |
| {1, 3} | $A_1 \times A_1$ | no | FREE | YES |
| {1, 4} | $A_1 \times A_1$ | no | FREE | YES |
| {2, 4} | $A_1 \times A_1$ | no | FREE | YES |
| {1, 2, 4} | $A_1 \times A_2$ | no | FREE | YES |
| {1, 3, 4} | $A_1 \times A_2$ | no | FREE | YES |

# E6

| subset | type | single cell | free | orbit basis |
|---|---|---|---|---|
| {} | | CHAMBER | (FREE) | (YES) |
| {1} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {2} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {3} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {4} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {5} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {6} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {1, 3} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {2, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {3, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {4, 5} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {5, 6} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {1, 3, 4} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 4} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 4, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {4, 5, 6} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 4} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {1, 3, 4, 5} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {2, 4, 5, 6} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5, 6} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {1, 3, 4, 5, 6} | $A_5$ | no | FREE | YES |
| {2, 3, 4, 5} | $D_4$ | no | no | (no) |
| {1, 2, 3, 4, 5} | $D_5$ | no | no | (no) |
| {2, 3, 4, 5, 6} | $D_5$ | no | no | (no) |
| {1, 2, 3, 4, 5, 6} | $E_6$ | CHAMBER | (FREE) | (YES) |
| {1, 2} | $A_1 \times A_1$ | no | FREE | no |
| {1, 4} | $A_1 \times A_1$ | no | FREE | no |
| {1, 5} | $A_1 \times A_1$ | no | FREE | no |
| {1, 6} | $A_1 \times A_1$ | no | FREE | no |
| {2, 3} | $A_1 \times A_1$ | no | FREE | no |
| {2, 5} | $A_1 \times A_1$ | no | FREE | no |
| {2, 6} | $A_1 \times A_1$ | no | FREE | no |
| {3, 5} | $A_1 \times A_1$ | no | FREE | no |
| {3, 6} | $A_1 \times A_1$ | no | FREE | no |
| {4, 6} | $A_1 \times A_1$ | no | FREE | no |
| {1, 2, 3} | $A_1 \times A_2$ | no | FREE | no |
| {1, 2, 4} | $A_1 \times A_2$ | no | FREE | no |
| {1, 3, 5} | $A_1 \times A_2$ | no | FREE | no |
| {1, 3, 6} | $A_1 \times A_2$ | no | FREE | no |
| {1, 4, 5} | $A_1 \times A_2$ | no | FREE | no |

6

| | | | | |
|---|---|---|---|---|
| $\{1,5,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,4,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,5,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{3,4,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{3,5,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4,5\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,3,4,6\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,4,5,6\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{2,3,4,6\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,2,3,4,6\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,2,4,5,6\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,3,5,6\}$ | $A_2 \times A_2$ | no | FREE | no |
| $\{1,2,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,2,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,4,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{2,3,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{2,3,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,2,3,5\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,3,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,5,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{2,3,5,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,3,5,6\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | no |

# E7

| subset | type | single cell | free | orbit basis |
|--------|------|-------------|------|-------------|
| {} | | CHAMBER | (FREE) | (YES) |
| {1} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {2} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {3} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {4} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {5} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {6} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {7} | $A_1$ | CHAMBER | (FREE) | (YES) |
| {1, 3} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {2, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {3, 4} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {4, 5} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {5, 6} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {6, 7} | $A_2$ | CHAMBER | (FREE) | (YES) |
| {1, 3, 4} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 3, 4} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {2, 4, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {4, 5, 6} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {5, 6, 7} | $A_3$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 4} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {1, 3, 4, 5} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {2, 4, 5, 6} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5, 6} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {4, 5, 6, 7} | $A_4$ | CHAMBER | (FREE) | (YES) |
| {1, 3, 4, 5, 6} | $A_5$ | no | FREE | YES |
| {2, 4, 5, 6, 7} | $A_5$ | CHAMBER | (FREE) | (YES) |
| {3, 4, 5, 6, 7} | $A_5$ | no | FREE | YES |
| {1, 3, 4, 5, 6, 7} | $A_6$ | no | FREE | YES |
| {2, 3, 4, 5} | $D_4$ | no | no | (no) |
| {1, 2, 3, 4, 5} | $D_5$ | no | no | (no) |
| {2, 3, 4, 5, 6} | $D_5$ | no | no | (no) |
| {2, 3, 4, 5, 6, 7} | $D_6$ | no | no | (no) |
| {1, 2, 3, 4, 5, 6} | $E_6$ | CHAMBER | (FREE) | (YES) |
| {1, 2, 3, 4, 5, 6, 7} | $E_7$ | CHAMBER | (FREE) | (YES) |
| {1, 2} | $A_1 \times A_1$ | no | FREE | no |
| {1, 4} | $A_1 \times A_1$ | no | FREE | no |
| {1, 5} | $A_1 \times A_1$ | no | FREE | no |
| {1, 6} | $A_1 \times A_1$ | no | FREE | no |
| {1, 7} | $A_1 \times A_1$ | no | FREE | no |
| {2, 3} | $A_1 \times A_1$ | no | FREE | no |

| | | | | |
|---|---|---|---|---|
| $\{2,5\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{2,6\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{2,7\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{3,5\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{3,6\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{3,7\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{4,6\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{4,7\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{5,7\}$ | $A_1 \times A_1$ | no | FREE | no |
| $\{1,2,3\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,3,5\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,3,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,3,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,4,5\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,5,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,6,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,4,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,4,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,5,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{2,6,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{3,4,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{3,4,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{3,5,6\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{3,6,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{4,5,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{4,6,7\}$ | $A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4,5\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,3,4,6\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,3,4,7\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,4,5,6\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,5,6,7\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{2,3,4,6\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{2,3,4,7\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{2,4,5,7\}$ | $A_1 \times A_3$ | no | no | (no) |
| $\{2,5,6,7\}$ | $A_1 \times A_3$ | no | no | (no) |
| $\{3,4,5,7\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{3,5,6,7\}$ | $A_1 \times A_3$ | no | FREE | no |
| $\{1,2,3,4,6\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,2,3,4,7\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,2,4,5,6\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,3,4,5,7\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,4,5,6,7\}$ | $A_1 \times A_4$ | no | FREE | no |
| $\{1,2,4,5,6,7\}$ | $A_1 \times A_5$ | no | FREE | no |
| $\{2,3,4,5,7\}$ | $A_1 \times D_4$ | no | no | (no) |
| $\{1,2,3,4,5,7\}$ | $A_1 \times D_5$ | no | no | (no) |

| | | | | |
|---|---|---|---|---|
| $\{1,3,5,6\}$ | $A_2 \times A_2$ | no | FREE | no |
| $\{1,3,6,7\}$ | $A_2 \times A_2$ | no | FREE | no |
| $\{2,4,6,7\}$ | $A_2 \times A_2$ | no | FREE | no |
| $\{3,4,6,7\}$ | $A_2 \times A_2$ | no | FREE | no |
| $\{1,3,4,6,7\}$ | $A_2 \times A_3$ | no | FREE | no |
| $\{1,3,5,6,7\}$ | $A_2 \times A_3$ | no | FREE | no |
| $\{2,3,4,6,7\}$ | $A_2 \times A_3$ | no | FREE | no |
| $\{1,2,3,4,6,7\}$ | $A_2 \times A_4$ | no | FREE | no |
| $\{1,2,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,2,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,2,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,4,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,4,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,5,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{2,3,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{2,3,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{2,3,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{2,5,7\}$ | $A_1 \times A_1 \times A_1$ | no | no | (no) |
| $\{3,5,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | no |
| $\{1,2,3,5\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,3,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,3,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,5,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,6,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,3,5,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,4,5,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,4,6,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{2,3,5,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{2,3,6,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | no |
| $\{1,2,4,5,7\}$ | $A_1 \times A_1 \times A_3$ | no | no | (no) |
| $\{1,2,5,6,7\}$ | $A_1 \times A_1 \times A_3$ | no | no | (no) |
| $\{2,3,5,6,7\}$ | $A_1 \times A_1 \times A_3$ | no | no | (no) |
| $\{1,2,3,5,6\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | no |
| $\{1,2,3,6,7\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | no |
| $\{1,2,4,6,7\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | no |
| $\{1,2,3,5,6,7\}$ | $A_1 \times A_2 \times A_3$ | no | no | (no) |
| $\{1,2,5,7\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | no | (no) |
| $\{2,3,5,7\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | no | (no) |
| $\{1,2,3,5,7\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | no | (no) |

# E8

| subset | type | single cell | free | orbit basis |
|---|---|:---:|:---:|:---:|
| {} | | CHAMBER | (FREE) | (???) |
| {1} | $A_1$ | CHAMBER | (FREE) | (???) |
| {2} | $A_1$ | CHAMBER | (FREE) | (???) |
| {3} | $A_1$ | CHAMBER | (FREE) | (???) |
| {4} | $A_1$ | CHAMBER | (FREE) | (???) |
| {5} | $A_1$ | CHAMBER | (FREE) | (???) |
| {6} | $A_1$ | CHAMBER | (FREE) | (???) |
| {7} | $A_1$ | CHAMBER | (FREE) | (???) |
| {8} | $A_1$ | CHAMBER | (FREE) | (???) |
| {1,3} | $A_2$ | CHAMBER | (FREE) | (???) |
| {2,4} | $A_2$ | CHAMBER | (FREE) | (???) |
| {3,4} | $A_2$ | CHAMBER | (FREE) | (???) |
| {4,5} | $A_2$ | CHAMBER | (FREE) | (???) |
| {5,6} | $A_2$ | CHAMBER | (FREE) | (???) |
| {6,7} | $A_2$ | CHAMBER | (FREE) | (???) |
| {7,8} | $A_2$ | CHAMBER | (FREE) | (???) |
| {1,3,4} | $A_3$ | CHAMBER | (FREE) | (???) |
| {2,3,4} | $A_3$ | CHAMBER | (FREE) | (???) |
| {2,4,5} | $A_3$ | CHAMBER | (FREE) | (???) |
| {3,4,5} | $A_3$ | CHAMBER | (FREE) | (???) |
| {4,5,6} | $A_3$ | CHAMBER | (FREE) | (???) |
| {5,6,7} | $A_3$ | CHAMBER | (FREE) | (???) |
| {6,7,8} | $A_3$ | CHAMBER | (FREE) | (???) |
| {1,2,3,4} | $A_4$ | CHAMBER | (FREE) | (???) |
| {1,3,4,5} | $A_4$ | CHAMBER | (FREE) | (???) |
| {2,4,5,6} | $A_4$ | CHAMBER | (FREE) | (???) |
| {3,4,5,6} | $A_4$ | CHAMBER | (FREE) | (???) |
| {4,5,6,7} | $A_4$ | CHAMBER | (FREE) | (???) |
| {5,6,7,8} | $A_4$ | CHAMBER | (FREE) | (???) |
| {1,3,4,5,6} | $A_5$ | no | FREE | ??? |
| {2,4,5,6,7} | $A_5$ | no | FREE | ??? |
| {3,4,5,6,7} | $A_5$ | no | FREE | ??? |
| {4,5,6,7,8} | $A_5$ | no | FREE | ??? |
| {1,3,4,5,6,7} | $A_6$ | no | FREE | ??? |
| {2,4,5,6,7,8} | $A_6$ | no | FREE | ??? |
| {3,4,5,6,7,8} | $A_6$ | no | FREE | ??? |
| {1,3,4,5,6,7,8} | $A_7$ | no | FREE | ??? |
| {2,3,4,5} | $D_4$ | no | no | (???) |
| {1,2,3,4,5} | $D_5$ | no | no | (???) |
| {2,3,4,5,6} | $D_5$ | no | no | (???) |
| {2,3,4,5,6,7} | $D_6$ | no | no | (???) |

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| | | | | |
|---|---|---|---|---|
| $\{2,3,4,5,6,7,8\}$ | $D_7$ | no | no | (???) |
| $\{1,2,3,4,5,6\}$ | $E_6$ | CHAMBER | (FREE) | (???) |
| $\{1,2,3,4,5,6,7\}$ | $E_7$ | no | no | (???) |
| $\{1,2,3,4,5,6,7,8\}$ | $E_8$ | CHAMBER | (FREE) | (???) |
| $\{1,2\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{1,4\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{1,5\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{1,6\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{1,7\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{1,8\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{2,5\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{2,6\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{2,7\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{2,8\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{3,5\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{3,6\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{3,7\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{3,8\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{4,6\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{4,7\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{4,8\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{5,7\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{5,8\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{6,8\}$ | $A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,3\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,5\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,6\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,4,5\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,5,6\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,6,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,7,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{2,4,6\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{2,4,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{2,4,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{2,5,6\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{2,6,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{2,7,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{3,4,6\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{3,4,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{3,4,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{3,5,6\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{3,6,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |

| Set | Group | | | |
|---|---|---|---|---|
| $\{3,7,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{4,5,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{4,5,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{4,6,7\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{4,7,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{5,6,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{5,7,8\}$ | $A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,5\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,3,4,6\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,3,4,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,3,4,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,4,5,6\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,5,6,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,6,7,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,6\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,4,5,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,4,5,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,5,6,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{2,6,7,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{3,4,5,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{3,4,5,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{3,5,6,7\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{3,6,7,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{4,5,6,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{4,6,7,8\}$ | $A_1 \times A_3$ | no | FREE | ??? |
| $\{1,2,3,4,6\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,3,4,7\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,3,4,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,4,5,6\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,3,4,5,7\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,3,4,5,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,4,5,6,7\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,5,6,7,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{2,4,5,6,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{2,5,6,7,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{3,4,5,6,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{3,5,6,7,8\}$ | $A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,4,5,6,7\}$ | $A_1 \times A_5$ | no | FREE | ??? |
| $\{1,3,4,5,6,8\}$ | $A_1 \times A_5$ | no | FREE | ??? |
| $\{1,4,5,6,7,8\}$ | $A_1 \times A_5$ | no | FREE | ??? |
| $\{1,2,4,5,6,7,8\}$ | $A_1 \times A_6$ | no | FREE | ??? |
| $\{2,3,4,5,7\}$ | $A_1 \times D_4$ | no | no | (???) |
| $\{2,3,4,5,8\}$ | $A_1 \times D_4$ | no | no | (???) |
| $\{1,2,3,4,5,7\}$ | $A_1 \times D_5$ | no | no | (???) |

| | | | | |
|---|---|---|---|---|
| $\{1,2,3,4,5,8\}$ | $A_1 \times D_5$ | no | no | (???) |
| $\{2,3,4,5,6,8\}$ | $A_1 \times D_5$ | no | no | (???) |
| $\{1,2,3,4,5,6,8\}$ | $A_1 \times E_6$ | no | FREE | ??? |
| $\{1,3,5,6\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{1,3,6,7\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{1,3,7,8\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{2,4,6,7\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{2,4,7,8\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{3,4,6,7\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{3,4,7,8\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{4,5,7,8\}$ | $A_2 \times A_2$ | no | FREE | ??? |
| $\{1,3,4,6,7\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{1,3,4,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{1,3,5,6,7\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{1,3,6,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,6,7\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{2,4,5,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{2,4,6,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{3,4,5,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{3,4,6,7,8\}$ | $A_2 \times A_3$ | no | FREE | ??? |
| $\{1,2,3,4,6,7\}$ | $A_2 \times A_4$ | no | FREE | ??? |
| $\{1,2,3,4,7,8\}$ | $A_2 \times A_4$ | no | FREE | ??? |
| $\{1,3,4,5,7,8\}$ | $A_2 \times A_4$ | no | FREE | ??? |
| $\{1,3,5,6,7,8\}$ | $A_2 \times A_4$ | no | FREE | ??? |
| $\{2,3,4,5,7,8\}$ | $A_2 \times D_4$ | no | no | (???) |
| $\{1,2,3,4,5,7,8\}$ | $A_2 \times D_5$ | no | no | (???) |
| $\{1,3,4,6,7,8\}$ | $A_3 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,6,7,8\}$ | $A_3 \times A_3$ | no | FREE | ??? |
| $\{1,2,3,4,6,7,8\}$ | $A_3 \times A_4$ | no | FREE | ??? |
| $\{1,2,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,4,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,4,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,4,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,5,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,5,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,6,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,5\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,6\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,5,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,5,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |

| | | | | |
|---|---|---|---|---|
| $\{2,6,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{3,5,7\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{3,5,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{3,6,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{4,6,8\}$ | $A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,3,5\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,5,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,6,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,7,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,5,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,5,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,3,6,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,4,5,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,4,5,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,4,6,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,4,7,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,5,6,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,5,7,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,3,5,6\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,3,6,7\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,3,7,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,4,6,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,5,6,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,5,7,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{3,4,6,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{3,5,6,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{3,5,7,8\}$ | $A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,5,7\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,2,4,5,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,2,5,6,7\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,2,6,7,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,3,4,6,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,4,5,6,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,4,6,7,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{2,3,4,6,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{2,3,5,6,7\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{2,3,6,7,8\}$ | $A_1 \times A_1 \times A_3$ | no | FREE | ??? |
| $\{1,2,3,4,6,8\}$ | $A_1 \times A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,4,5,6,8\}$ | $A_1 \times A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,5,6,7,8\}$ | $A_1 \times A_1 \times A_4$ | no | FREE | ??? |

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|---|---|---|---|---|
| $\{2,3,5,6,7,8\}$ | $A_1 \times A_1 \times A_4$ | no | FREE | ??? |
| $\{1,2,3,5,6\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,6,7\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,7,8\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,6,7\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,7,8\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,3,5,6,8\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,3,5,7,8\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,4,5,7,8\}$ | $A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,5,6,7\}$ | $A_1 \times A_2 \times A_3$ | no | FREE | ??? |
| $\{1,2,3,6,7,8\}$ | $A_1 \times A_2 \times A_3$ | no | FREE | ??? |
| $\{1,2,4,5,7,8\}$ | $A_1 \times A_2 \times A_3$ | no | FREE | ??? |
| $\{1,2,4,6,7,8\}$ | $A_1 \times A_2 \times A_3$ | no | FREE | ??? |
| $\{1,2,3,5,6,7,8\}$ | $A_1 \times A_2 \times A_4$ | no | FREE | ??? |
| $\{1,2,5,7\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,5,8\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,4,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,5,7\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,5,8\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{2,3,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_1$ | no | FREE | ??? |
| $\{1,2,3,5,7\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,5,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,4,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,5,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,5,7,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,3,5,6,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{2,3,5,7,8\}$ | $A_1 \times A_1 \times A_1 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,5,6,8\}$ | $A_1 \times A_1 \times A_2 \times A_2$ | no | FREE | ??? |
| $\{1,2,3,5,7,8\}$ | $A_1 \times A_1 \times A_2 \times A_2$ | no | FREE | ??? |