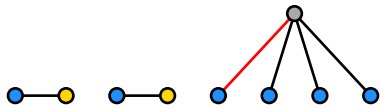
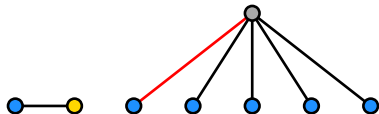


---- excess: 3      (g,n): (2, 11), (4, 8), (6, 5), (8, 2)      graphs: 106 ----  
 ----- edges: 10-n      graphs: 6 -----  
 --- A3 case      graphs: 6 ---

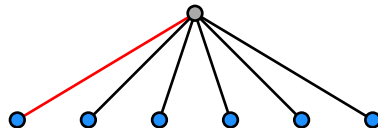
ID: 23     $V_1^n$   
 n: 5 2     $\mapsto$  ID 46



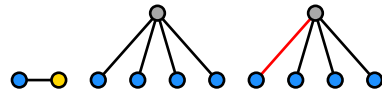
ID: 24     $V_1^n$   
 n: 5 2     $\mapsto$  ID 34



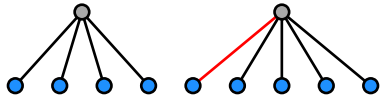
ID: 25     $V_1^n$   
 n: 5 2     $\mapsto$  ID 39



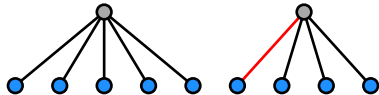
ID: 26     $V_1^n$   
 n: 2     $\mapsto$  ID 41



ID: 27     $V_1^n$   
 n: 2     $\mapsto$  ID 44

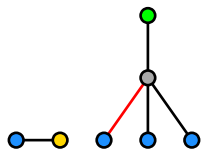


ID: 28     $V_1^n$   
 n: 2     $\mapsto$  ID 45

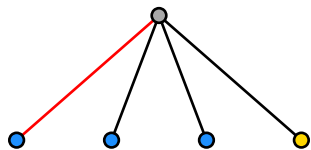


----- edges: 11-n      graphs: 28      -----  
 --- A3 case      graphs: 17      ---

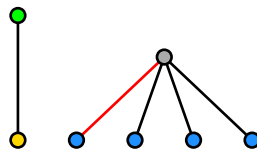
ID: 29     $V_1^{n-1} \boxtimes V_1$   
 n: 8 5 2     $\mapsto$  ID 78



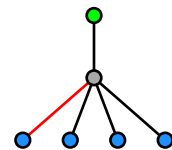
ID: 30     $V_1^n$   
 n: 8 5 2     $\mapsto$  ID 73



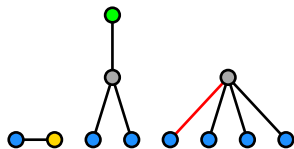
ID: 31     $V_1^{n-1} \boxtimes V_1$   
 n: 8 5 2     $\mapsto$  ID 77



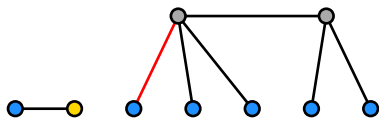
ID: 32     $V_1^{n-1} \boxtimes V_1$   
 n: 8 5 2     $\mapsto$  ID 61



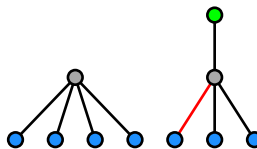
ID: 33     $V_1^{n-1} \boxtimes V_1$   
 n: 5 2     $\mapsto$  ID 82



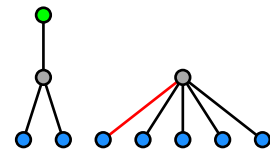
ID: 34     $V_1^n$   
 n: 5 2     $\mapsto$  ID 24



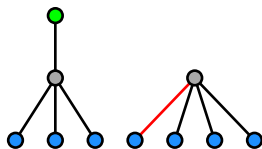
ID: 35     $V_1^{n-1} \boxtimes V_1$   
 n: 5 2     $\mapsto$  ID 62



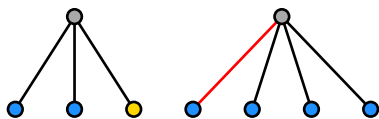
ID: 36     $V_1^{n-1} \boxtimes V_1$   
 n: 5 2     $\mapsto$  ID 64



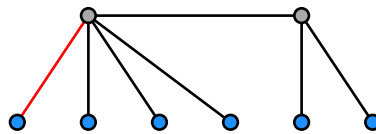
ID: 37     $V_1^{n-1} \boxtimes V_1$   
 n: 5 2     $\mapsto$  ID 65



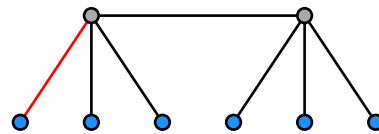
ID: 38     $V_1^n$   
 n: 5 2     $\mapsto$  ID 84



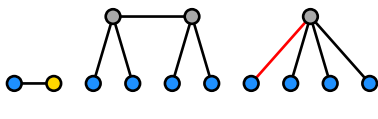
ID: 39     $V_1^n$   
 n: 5 2     $\mapsto$  ID 25



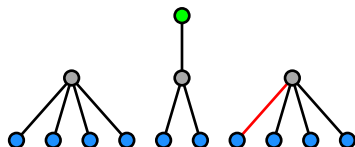
ID: 40     $V_1^n$   
 n: 5 2     $\mapsto$  ID 66



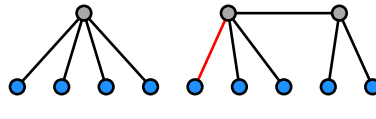
ID: 41     $V_1^n$   
 n: 2     $\mapsto$  ID 26



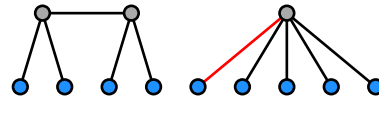
ID: 42     $V_1^{n-1} \boxtimes V_1$   
 n: 2     $\mapsto$  ID 67



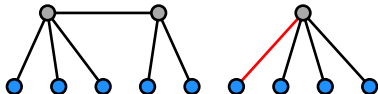
ID: 43     $V_1^n$   
 n: 2     $\mapsto$  ID 68



ID: 44     $V_1^n$   
 n: 2     $\mapsto$  ID 27

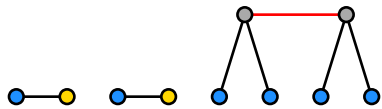


ID: 45     $V_1^n$   
 n: 2     $\mapsto$  ID 28

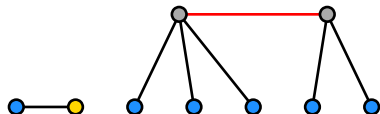


--- B,Birr cases without weight 11 relations      graphs: 11 ---

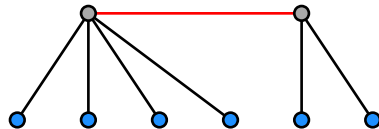
ID: 46  $V_1^n$   
n: 5 2  $\leftrightarrow$  ID 23



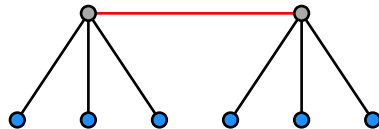
ID: 47  $V_1^n$   
n: 5 2  $\mapsto$  ID 86



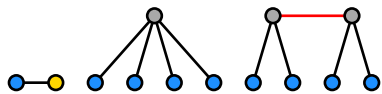
ID: 48  $V_1^n$   
n: 5 2  $\mapsto$  ID 89



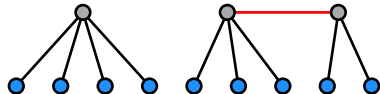
ID: 49  $V_1^n$   
n: 5 2  $\mapsto$  ID 88



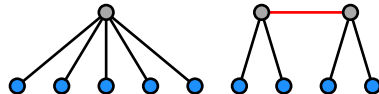
ID: 50  $V_1^n$   
n: 2  $\mapsto$  ID 91



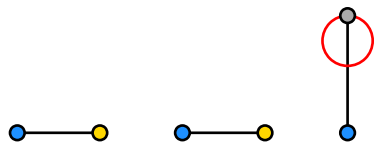
ID: 52  $V_1^n$   
n: 2  $\mapsto$  ID 94



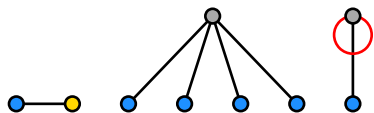
ID: 51  $V_1^n$   
n: 2  $\mapsto$  ID 93



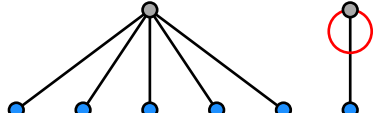
ID: 53  $V_1^n$   
n: 8 5 2  $\mapsto$  ID 100



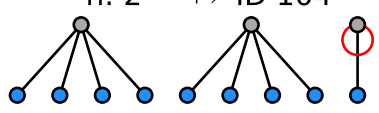
ID: 54  $V_1^n$   
n: 5 2  $\mapsto$  ID 101



ID: 55  $V_1^n$   
n: 5 2  $\mapsto$  ID 103

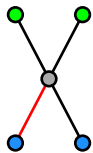


ID: 56  $V_1^n$   
n: 2  $\mapsto$  ID 104

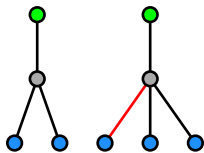


----- edges: 12-n  
 --- A3 case graphs: 48  
 graphs: 12 ---

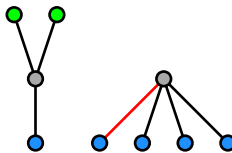
ID: 57  $V_1^{n-2} \boxtimes V_2$   
 n: 11 8 5 2  $\mapsto$  ID 113



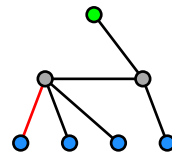
ID: 58  $V_1^{n-2} \boxtimes V_1 \boxtimes V_1$   
 n: 8 5 2  $\mapsto$  ID 115



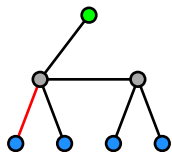
ID: 59  $V_1^{n-2} \boxtimes V_2$   
 n: 8 5 2  $\mapsto$  ID 114



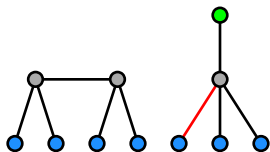
ID: 60  $V_1^{n-1} \boxtimes V_1$   
 n: 8 5 2  $\mapsto$  ID 110



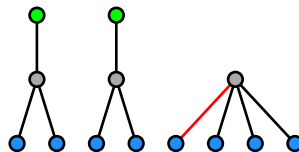
ID: 61  $V_1^{n-1} \boxtimes V_1$   
 n: 8 5 2  $\leftarrow$  ID 32



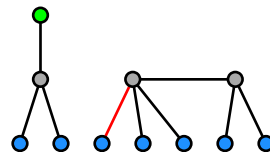
ID: 62  $V_1^{n-1} \boxtimes V_1$   
 n: 5 2  $\leftarrow$  ID 35



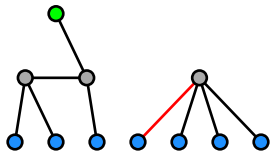
ID: 63  $V_1^{n-2} \boxtimes V_2$   
 n: 5 2  $\mapsto$  ID 118



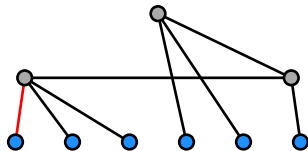
ID: 64  $V_1^{n-1} \boxtimes V_1$   
 n: 5 2  $\leftarrow$  ID 36



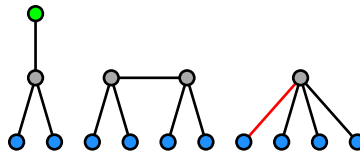
ID: 65  $V_1^{n-1} \boxtimes V_1$   
 n: 5 2  $\leftarrow$  ID 37



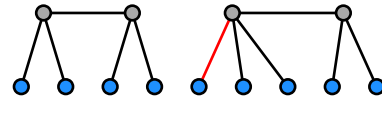
ID: 66  $V_1^n$   
 n: 5 2  $\leftarrow$  ID 40



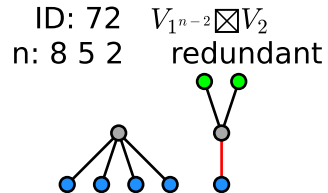
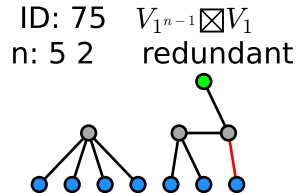
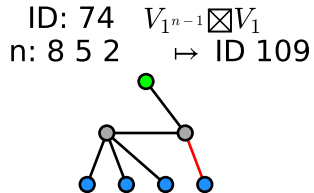
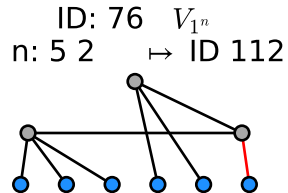
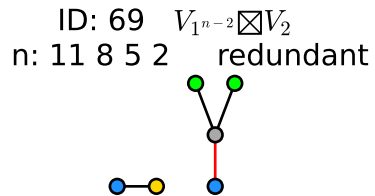
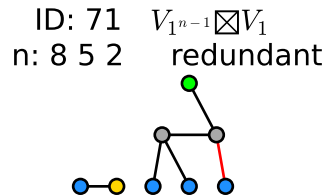
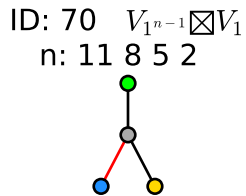
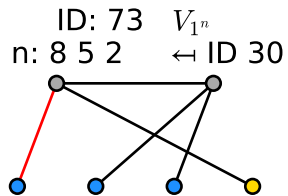
ID: 67  $V_1^{n-1} \boxtimes V_1$   
 n: 2  $\leftarrow$  ID 42



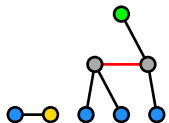
ID: 68  $V_1^n$   
 n: 2  $\leftarrow$  ID 43



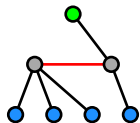
--- A2 case with weight 13 relations      relation groups: 2 ---



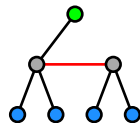
ID: 78  $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2  $\leftrightarrow$  ID 29



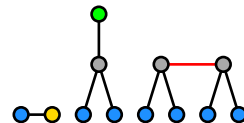
ID: 80  $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2  $\mapsto$  ID 116



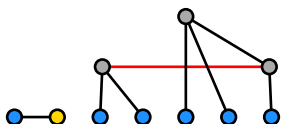
ID: 81  $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2  $\mapsto$  ID 117



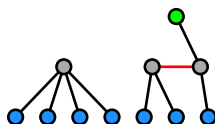
ID: 82  $V_1^{n-1} \boxtimes V_1$   
n: 5 2  $\leftrightarrow$  ID 33



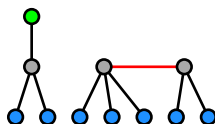
ID: 86  $V_1^n$   
n: 5 2  $\leftrightarrow$  ID 47



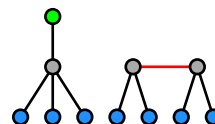
ID: 87  $V_1^{n-1} \boxtimes V_1$   
n: 5 2  $\mapsto$  ID 121



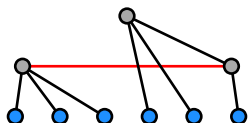
ID: 85  $V_1^{n-1} \boxtimes V_1$   
n: 5 2  $\mapsto$  ID 120



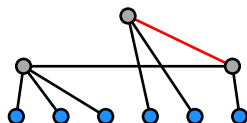
ID: 83  $V_1^{n-1} \boxtimes V_1$   
n: 5 2  $\mapsto$  ID 119



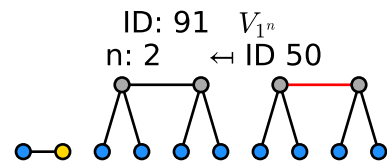
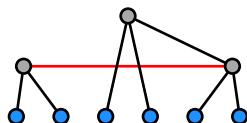
ID: 88  $V_1^n$   
n: 5 2  $\leftrightarrow$  ID 49



ID: 90  $V_1^n$   
n: 5 2  $\mapsto$  ID 122

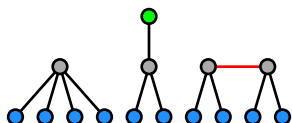


ID: 89  $V_1^n$   
n: 5 2  $\leftrightarrow$  ID 48

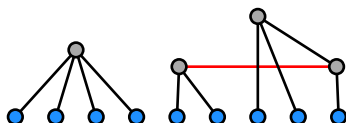


ID: 91  $V_1^n$   
n: 2  $\leftrightarrow$  ID 50

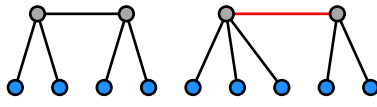
ID: 92  $V_1^{n-1} \boxtimes V_1$   
n: 2  $\mapsto$  ID 123



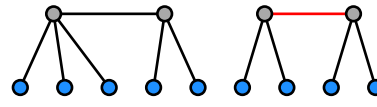
ID: 95  $V_1^n$   
n: 2  $\mapsto$  ID 124



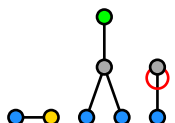
ID: 94  $V_1^n$   
n: 2  $\leftrightarrow$  ID 52



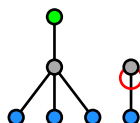
ID: 93  $V_1^n$   
n: 2  $\leftrightarrow$  ID 51



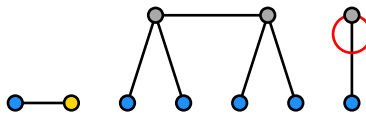
ID: 98  $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2



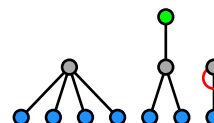
ID: 99  $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2  $\mapsto$  ID 127



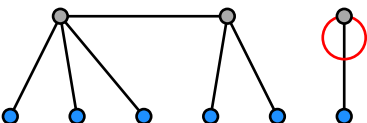
ID: 101  $V_1^n$   
n: 5 2  $\leftrightarrow$  ID 54



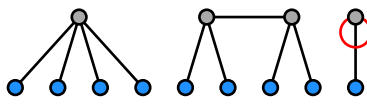
ID: 102  $V_1^{n-1} \boxtimes V_1$   
n: 5 2  $\mapsto$  ID 128



ID: 103  $V_1^n$   
n: 5 2  $\leftrightarrow$  ID 55

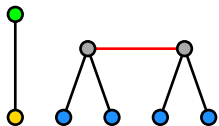


ID: 104  $V_1^n$   
n: 2  $\leftrightarrow$  ID 56

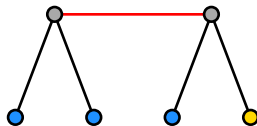


--- B,Birr cases with weight 11 relations      relation groups: 2 ---

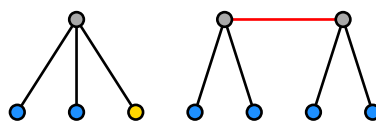
ID: 77     $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2     $\leftrightarrow$  ID 31



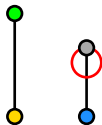
ID: 79     $V_1^n$   
n: 8 5 2    redundant



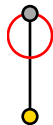
ID: 84     $V_1^n$   
n: 5 2     $\leftrightarrow$  ID 38



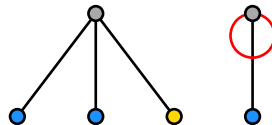
ID: 97     $V_1^{n-1} \boxtimes V_1$   
n: 11 8 5 2



ID: 96     $V_1^n$   
n: 11 8 5 2    redundant

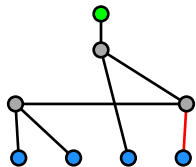


ID: 100     $V_1^n$   
n: 8 5 2     $\leftrightarrow$  ID 53

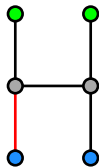


----- edges: 13-n      graphs: 24      -----  
 --- A2 case with weight 13 relations      relation groups: 2 ---

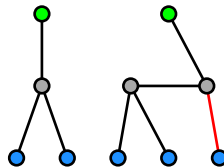
ID: 110     $V_{1^{n-1}} \boxtimes V_1$   
 n: 8 5 2     $\leftrightarrow$  ID 60



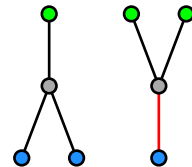
ID: 106     $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$   
 n: 11 8 5 2



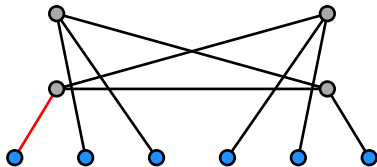
ID: 108     $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$   
 n: 8 5 2    redundant



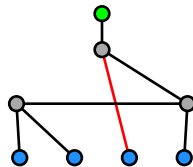
ID: 105     $V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$   
 n: 11 8 5    redundant



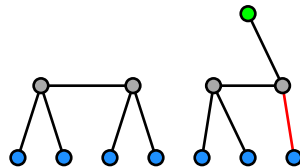
ID: 112     $V_1^n$   
 n: 5 2     $\leftrightarrow$  ID 76



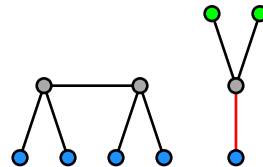
ID: 109     $V_{1^{n-1}} \boxtimes V_1$   
 n: 8 5 2     $\leftrightarrow$  ID 74



ID: 111     $V_{1^{n-1}} \boxtimes V_1$   
 n: 5 2    redundant

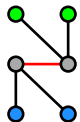


ID: 107     $V_{1^{n-2}} \boxtimes V_2$   
 n: 8 5 2    redundant

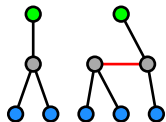




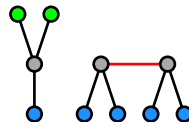
ID: 113     $V_1^{n-2} \boxtimes V_2$   
n: 11 8 5 2     $\leftrightarrow$  ID 57



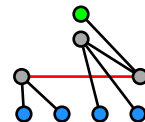
ID: 115     $V_1^{n-2} \boxtimes V_1 \boxtimes V_1$   
n: 8 5 2     $\leftrightarrow$  ID 58



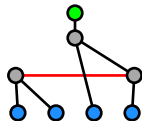
ID: 114     $V_1^{n-2} \boxtimes V_2$   
n: 8 5 2     $\leftrightarrow$  ID 59



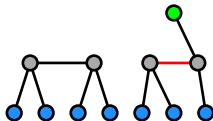
ID: 116     $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2     $\leftrightarrow$  ID 80



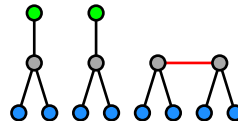
ID: 117     $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2     $\leftrightarrow$  ID 81



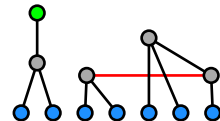
ID: 121     $V_1^{n-1} \boxtimes V_1$   
n: 5 2     $\leftrightarrow$  ID 87



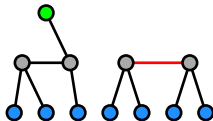
ID: 118     $V_1^{n-2} \boxtimes V_2$   
n: 5 2     $\leftrightarrow$  ID 63



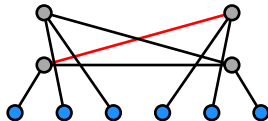
ID: 120     $V_1^{n-1} \boxtimes V_1$   
n: 5 2     $\leftrightarrow$  ID 85



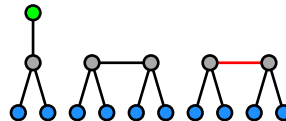
ID: 119     $V_1^{n-1} \boxtimes V_1$   
n: 5 2     $\leftrightarrow$  ID 83



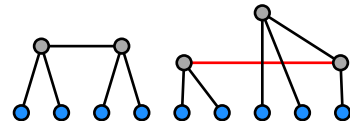
ID: 122     $V_1^n$   
n: 5 2     $\leftrightarrow$  ID 90



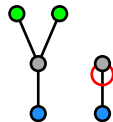
ID: 123     $V_1^{n-1} \boxtimes V_1$   
n: 2     $\leftrightarrow$  ID 92



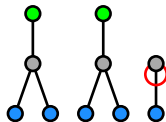
ID: 124     $V_1^n$   
n: 2     $\leftrightarrow$  ID 95



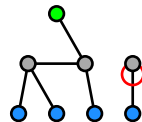
ID: 125     $V_1^{n-2} \boxtimes V_2$   
n: 11 8 5 2



ID: 126     $V_1^{n-2} \boxtimes V_2$   
n: 8 5 2



ID: 127     $V_1^{n-1} \boxtimes V_1$   
n: 8 5 2     $\leftrightarrow$  ID 99



ID: 128     $V_1^{n-1} \boxtimes V_1$   
n: 5 2     $\leftrightarrow$  ID 102

