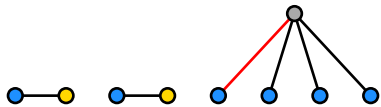
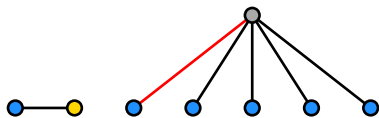


---- excess: 3 (g,n): (2, 11), (4, 8), (6, 5), (8, 2) graphs: 106 ----
 ----- edges: 10-n graphs: 6 -----
 --- A3 case graphs: 6 ---

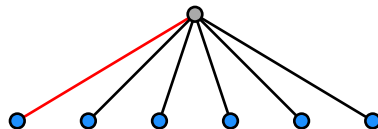
ID: 23 V_1^n
 n: 5 2 \mapsto ID 46



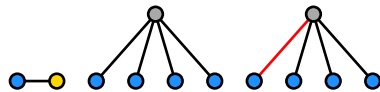
ID: 24 V_1^n
 n: 5 2 \mapsto ID 34



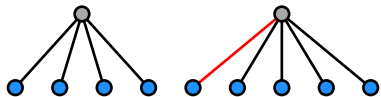
ID: 25 V_1^n
 n: 5 2 \mapsto ID 39



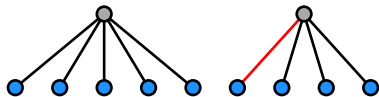
ID: 26 V_1^n
 n: 2 \mapsto ID 41



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

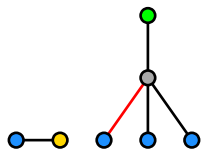


ID: 28 V_1^n
 n: 2 \mapsto ID 45

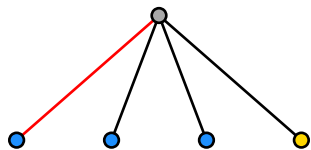


----- edges: 11-n graphs: 28 -----
 --- A3 case graphs: 17 ---

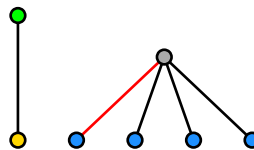
ID: 29 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 78



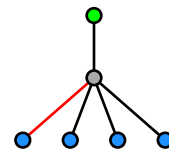
ID: 30 V_1^n
 n: 8 5 2 \mapsto ID 73



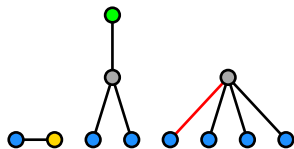
ID: 31 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 77



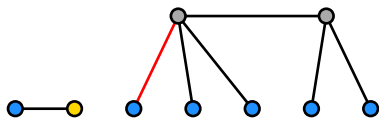
ID: 32 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 61



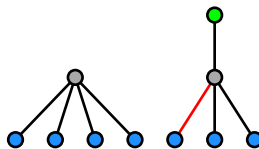
ID: 33 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 82



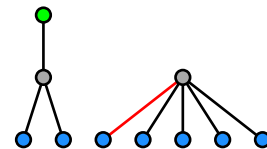
ID: 34 V_1^n
 n: 5 2 \mapsto ID 24



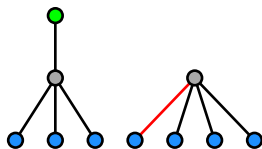
ID: 35 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 62



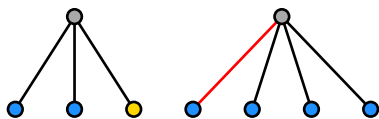
ID: 36 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 64



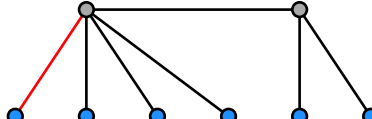
ID: 37 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 65



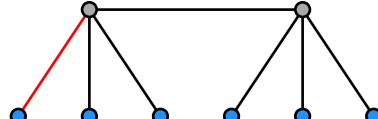
ID: 38 V_1^n
 n: 5 2 \mapsto ID 84



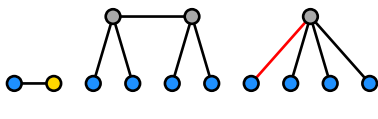
ID: 39 V_1^n
 n: 5 2 \mapsto ID 25



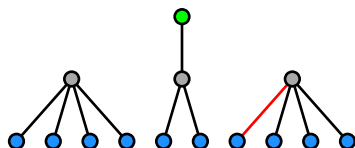
ID: 40 V_1^n
 n: 5 2 \mapsto ID 66



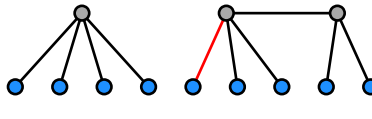
ID: 41 V_1^n
 n: 2 \mapsto ID 26



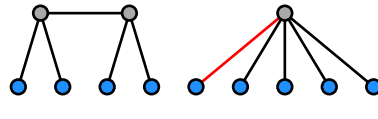
ID: 42 $V_1^{n-1} \boxtimes V_1$
 n: 2 \mapsto ID 67



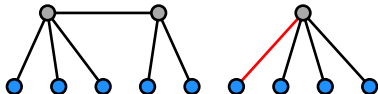
ID: 43 V_1^n
 n: 2 \mapsto ID 68



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

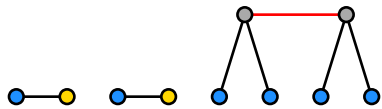


ID: 45 V_1^n
 n: 2 \mapsto ID 28

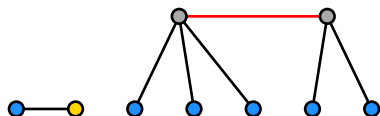


--- B,Birr cases without weight 11 relations graphs: 11 ---

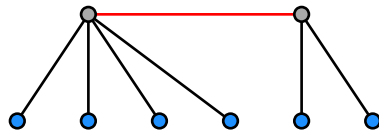
ID: 46 V_1^n
n: 5 2 \leftrightarrow ID 23



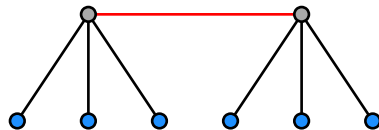
ID: 47 V_1^n
n: 5 2 \mapsto ID 86



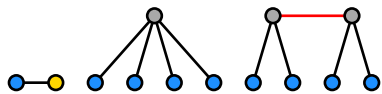
ID: 48 V_1^n
n: 5 2 \mapsto ID 89



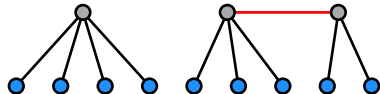
ID: 49 V_1^n
n: 5 2 \mapsto ID 88



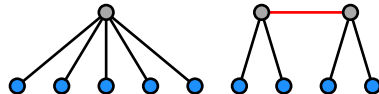
ID: 50 V_1^n
n: 2 \mapsto ID 91



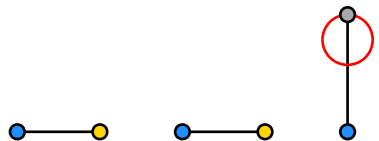
ID: 52 V_1^n
n: 2 \mapsto ID 94



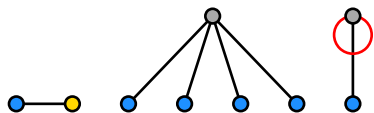
ID: 51 V_1^n
n: 2 \mapsto ID 93



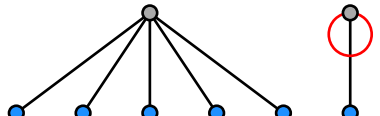
ID: 53 V_1^n
n: 8 5 2 \mapsto ID 100



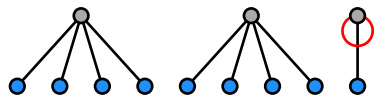
ID: 54 V_1^n
n: 5 2 \mapsto ID 101



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

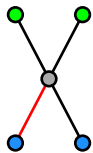


ID: 56 V_1^n
n: 2 \mapsto ID 104

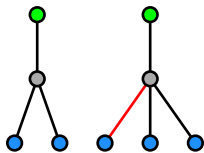


----- edges: 12-n
 --- A3 case graphs: 48
 graphs: 12 ---

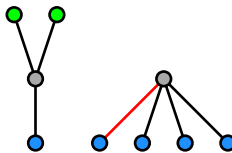
ID: 57 $V_1^{n-2} \boxtimes V_2$
 n: 11 8 5 2 \mapsto ID 113



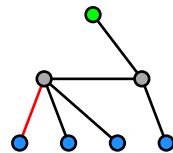
ID: 58 $V_1^{n-2} \boxtimes V_1 \boxtimes V_1$
 n: 8 5 2 \mapsto ID 115



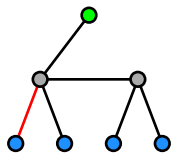
ID: 59 $V_1^{n-2} \boxtimes V_2$
 n: 8 5 2 \mapsto ID 114



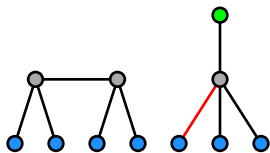
ID: 60 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 110



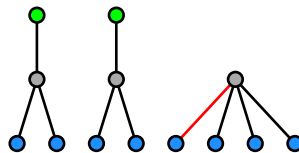
ID: 61 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \leftarrow ID 32



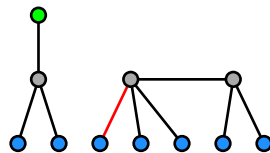
ID: 62 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \leftarrow ID 35



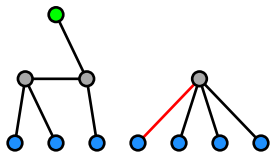
ID: 63 $V_1^{n-2} \boxtimes V_2$
 n: 5 2 \mapsto ID 118



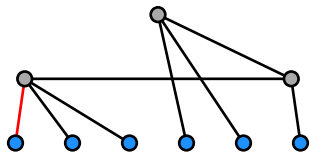
ID: 64 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \leftarrow ID 36



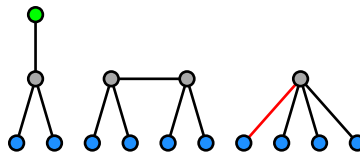
ID: 65 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \leftarrow ID 37



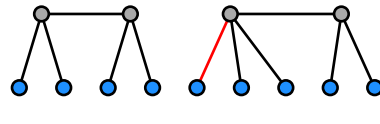
ID: 66 V_1^n
 n: 5 2 \leftarrow ID 40



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

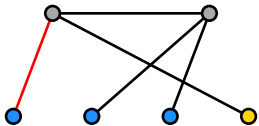


ID: 68 V_1^n
 n: 2 \leftarrow ID 43

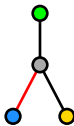


--- A2 case with weight 13 relations relation groups: 2 ---

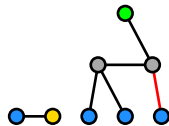
ID: 73 V_1^n
n: 8 5 2 \leftrightarrow ID 30



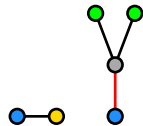
ID: 70 $V_1^{n-1} \boxtimes V_1$
n: 11 8 5 2



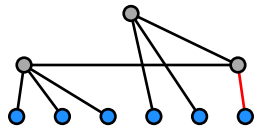
ID: 71 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 redundant



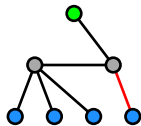
ID: 69 $V_1^{n-2} \boxtimes V_2$
n: 11 8 5 2 redundant



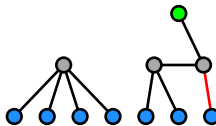
ID: 76 V_1^n
n: 5 2 \mapsto ID 112



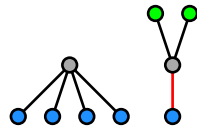
ID: 74 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 109



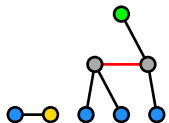
ID: 75 $V_1^{n-1} \boxtimes V_1$
n: 5 2 redundant



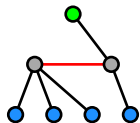
ID: 72 $V_1^{n-2} \boxtimes V_2$
n: 8 5 2 redundant



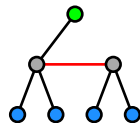
ID: 78 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 29



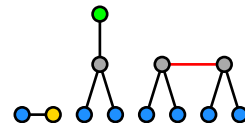
ID: 80 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 116



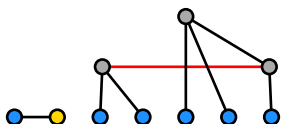
ID: 81 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 117



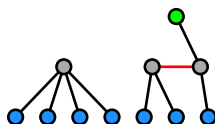
ID: 82 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 33



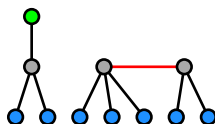
ID: 86 V_1^n
n: 5 2 \leftrightarrow ID 47



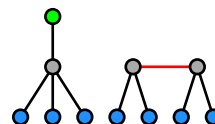
ID: 87 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 121



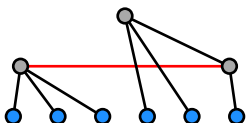
ID: 85 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 120



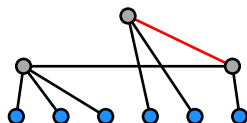
ID: 83 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 119



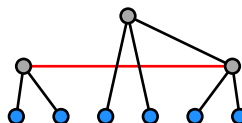
ID: 88 V_1^n
n: 5 2 \leftrightarrow ID 49



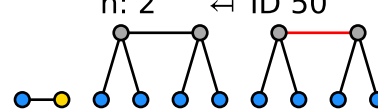
ID: 90 V_1^n
n: 5 2 \mapsto ID 122



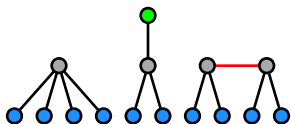
ID: 89 V_1^n
n: 5 2 \leftrightarrow ID 48



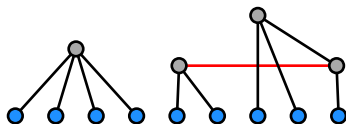
ID: 91 V_1^n
n: 2 \leftrightarrow ID 50



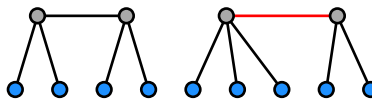
ID: 92 $V_1^{n-1} \boxtimes V_1$
n: 2 \mapsto ID 123



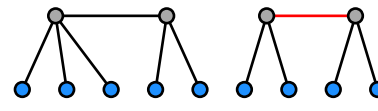
ID: 95 V_1^n
n: 2 \mapsto ID 124



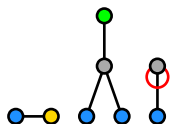
ID: 94 V_1^n
n: 2 \leftrightarrow ID 52



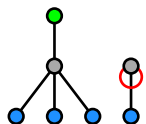
ID: 93 V_1^n
n: 2 \leftrightarrow ID 51



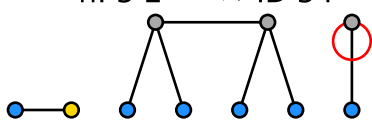
ID: 98 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2



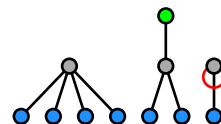
ID: 99 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 127



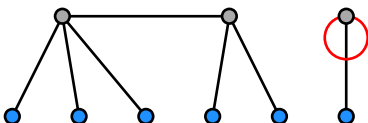
ID: 101 V_1^n
n: 5 2 \leftrightarrow ID 54



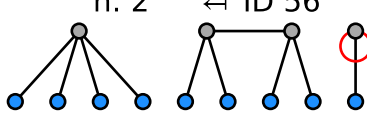
ID: 102 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 128



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

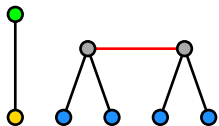


ID: 104 V_1^n
n: 2 \leftrightarrow ID 56

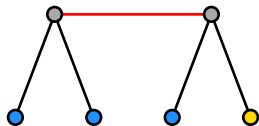


--- B,Birr cases with weight 11 relations relation groups: 2 ---

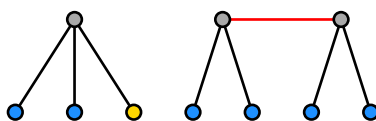
ID: 77 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 31



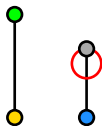
ID: 79 V_1^n
n: 8 5 2 redundant



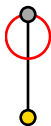
ID: 84 V_1^n
n: 5 2 \leftrightarrow ID 38



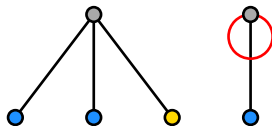
ID: 97 $V_1^{n-1} \boxtimes V_1$
n: 11 8 5 2



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

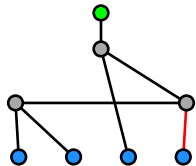


ID: 100 V_1^n
n: 8 5 2 \leftrightarrow ID 53

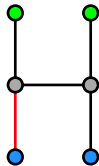


----- edges: 13-n graphs: 24 -----
 --- A2 case with weight 13 relations relation groups: 2 ---

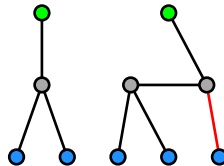
ID: 110 $V_{1^{n-1}} \boxtimes V_1$
 n: 8 5 2 \leftarrow ID 60



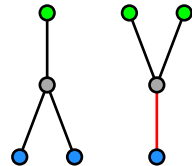
ID: 106 $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
 n: 11 8 5 2



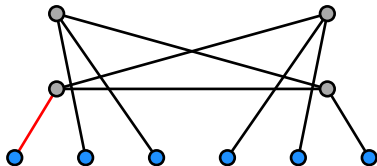
ID: 108 $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
 n: 8 5 2 redundant



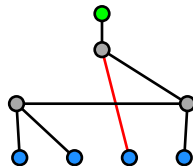
ID: 105 $V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
 n: 11 8 5 redundant



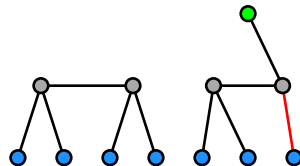
ID: 112 V_1^n
 n: 5 2 \leftarrow ID 76



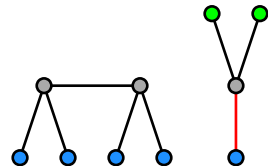
ID: 109 $V_{1^{n-1}} \boxtimes V_1$
 n: 8 5 2 \leftarrow ID 74



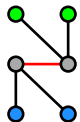
ID: 111 $V_{1^{n-1}} \boxtimes V_1$
 n: 5 2 redundant



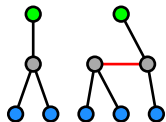
ID: 107 $V_{1^{n-2}} \boxtimes V_2$
 n: 8 5 2 redundant



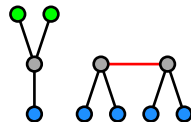
ID: 113 $V_{1^{n-2}} \boxtimes V_2$
n: 11 8 5 2 \leftrightarrow ID 57



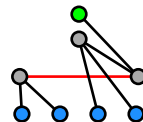
ID: 115 $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 58



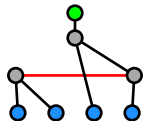
ID: 114 $V_{1^{n-2}} \boxtimes V_2$
n: 8 5 2 \leftrightarrow ID 59



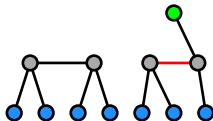
ID: 116 $V_{1^{n-1}} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 80



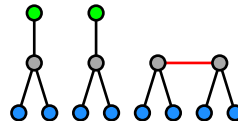
ID: 117 $V_{1^{n-1}} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 81



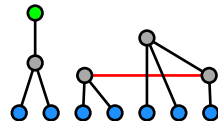
ID: 121 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 87



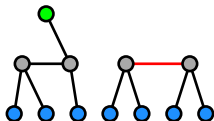
ID: 118 $V_{1^{n-2}} \boxtimes V_2$
n: 5 2 \leftrightarrow ID 63



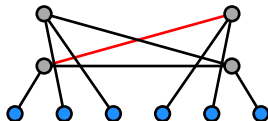
ID: 120 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 85



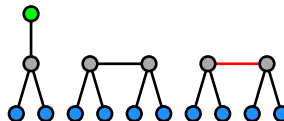
ID: 119 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 83



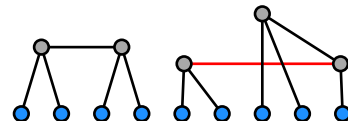
ID: 122 V_{1^n}
n: 5 2 \leftrightarrow ID 90



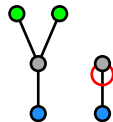
ID: 123 $V_{1^{n-1}} \boxtimes V_1$
n: 2 \leftrightarrow ID 92



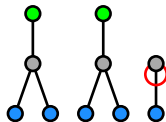
ID: 124 V_{1^n}
n: 2 \leftrightarrow ID 95



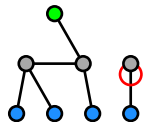
ID: 125 $V_{1^{n-2}} \boxtimes V_2$
n: 11 8 5 2



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

