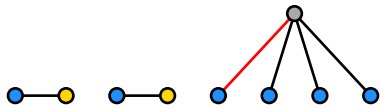
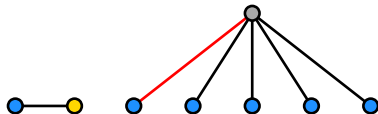


----- excess: 3 (g,n): (2, 11), (4, 8), (6, 5), (8, 2) graphs: 106 -----
 ----- edges: 10-n graphs: 6 -----
 --- A3 case graphs: 6 ---

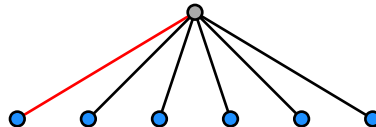
ID: 106 V_1^n
 n: 5 2 \mapsto ID 113



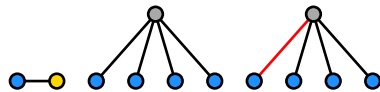
ID: 74 V_1^n
 n: 5 2 \mapsto ID 76



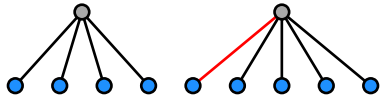
ID: 23 V_1^n
 n: 5 2 \mapsto ID 27



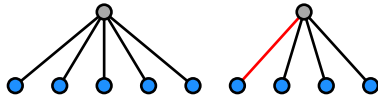
ID: 107 V_1^n
 n: 2 \mapsto ID 109



ID: 82 V_1^n
 n: 2 \mapsto ID 98

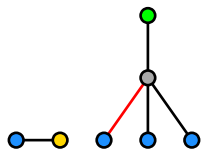


ID: 54 V_1^n
 n: 2 \mapsto ID 58

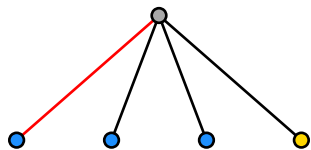


----- edges: 11-n graphs: 28 -----
 --- A3 case graphs: 17 ---

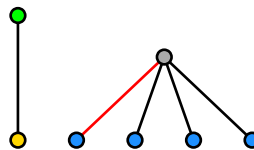
ID: 75 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 80



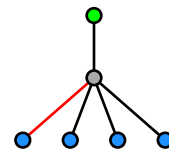
ID: 24 V_1^n
 n: 8 5 2 \mapsto ID 33



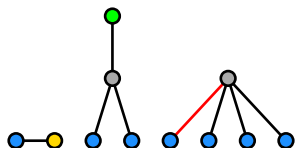
ID: 53 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 60



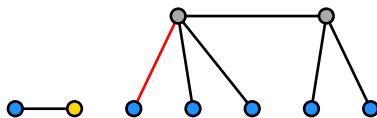
ID: 25 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 30



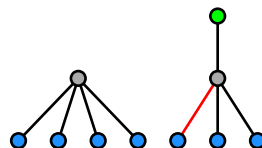
ID: 108 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 115



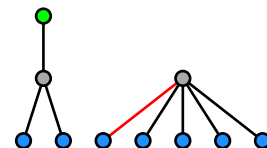
ID: 76 V_1^n
 n: 5 2 \leftarrow ID 74



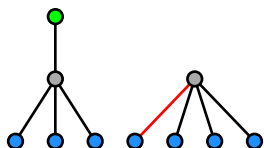
ID: 83 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 99



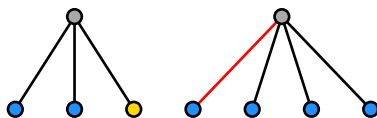
ID: 90 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 92



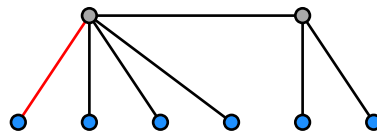
ID: 56 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \mapsto ID 59



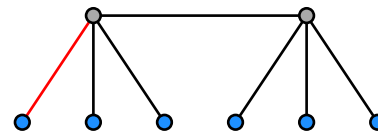
ID: 55 V_1^n
 n: 5 2 \mapsto ID 62



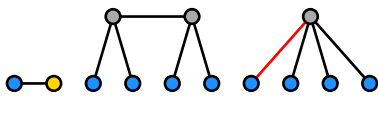
ID: 27 V_1^n
 n: 5 2 \leftarrow ID 23



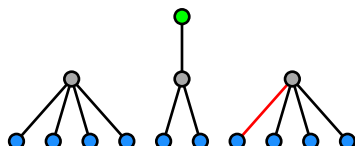
ID: 28 V_1^n
 n: 5 2 \mapsto ID 31



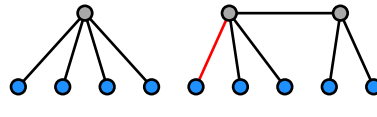
ID: 109 V_1^n
 n: 2 \leftarrow ID 107



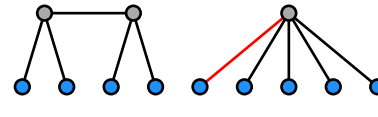
ID: 110 $V_1^{n-1} \boxtimes V_1$
 n: 2 \mapsto ID 112



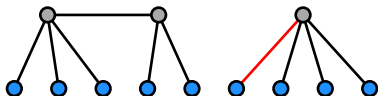
ID: 84 V_1^n
 n: 2 \mapsto ID 100



ID: 98 V_1^n
 n: 2 \leftarrow ID 82

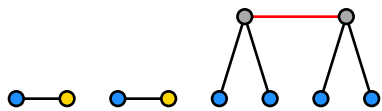


ID: 58 V_1^n
 n: 2 \leftarrow ID 54

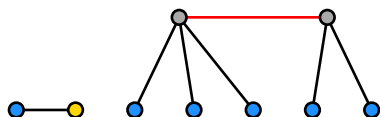


--- B,Birr cases without weight 11 relations graphs: 11 ---

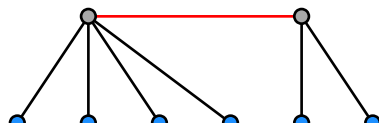
ID: 113 V_1^n
n: 5 2 \leftrightarrow ID 106



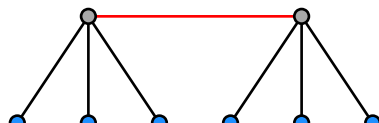
ID: 79 V_1^n
n: 5 2 \mapsto ID 81



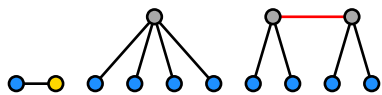
ID: 40 V_1^n
n: 5 2 \mapsto ID 48



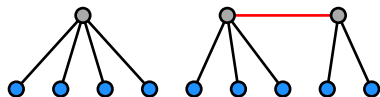
ID: 41 V_1^n
n: 5 2 \mapsto ID 46



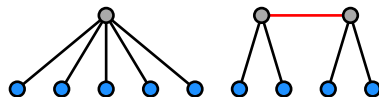
ID: 114 V_1^n
n: 2 \mapsto ID 116



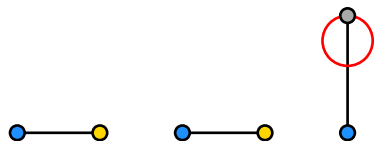
ID: 87 V_1^n
n: 2 \mapsto ID 103



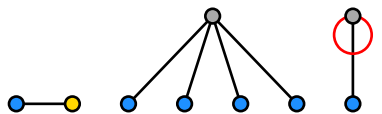
ID: 61 V_1^n
n: 2 \mapsto ID 65



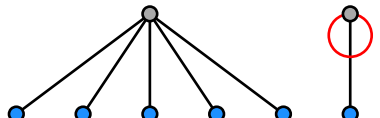
ID: 120 V_1^n
n: 8 5 2 \mapsto ID 69



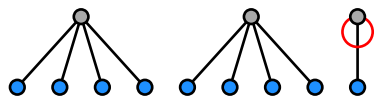
ID: 121 V_1^n
n: 5 2 \mapsto ID 123



ID: 68 V_1^n
n: 5 2 \mapsto ID 72

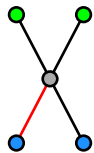


ID: 124 V_1^n
n: 2 \mapsto ID 126

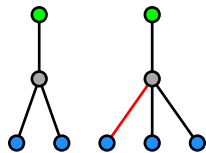


----- edges: 12-n
 --- A3 case graphs: 48
 graphs: 12 ---

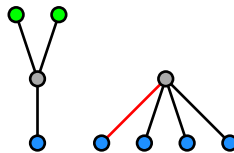
ID: 26 $V_1^{n-2} \boxtimes V_2$
 n: 11 8 5 2



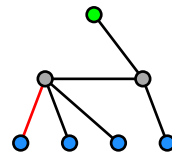
ID: 91 $V_1^{n-2} \boxtimes V_1 \boxtimes V_1$
 n: 8 5 2 \mapsto ID 96



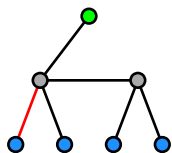
ID: 57 $V_1^{n-2} \boxtimes V_2$
 n: 8 5 2 \mapsto ID 64



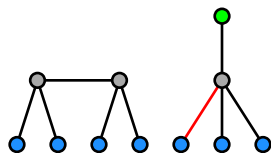
ID: 29 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \mapsto ID 38



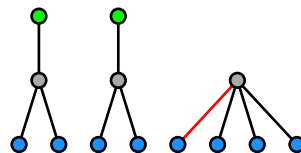
ID: 30 $V_1^{n-1} \boxtimes V_1$
 n: 8 5 2 \leftarrow ID 25



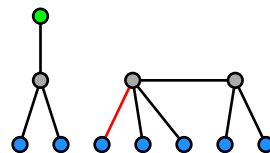
ID: 99 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \leftarrow ID 83



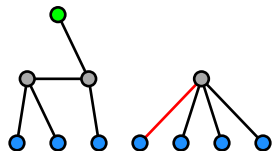
ID: 111 $V_1^{n-2} \boxtimes V_2$
 n: 5 2 \mapsto ID 118



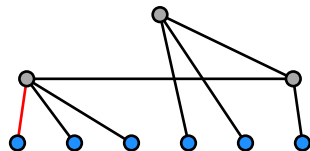
ID: 92 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \leftarrow ID 90



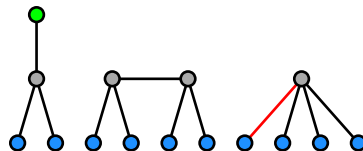
ID: 59 $V_1^{n-1} \boxtimes V_1$
 n: 5 2 \leftarrow ID 56



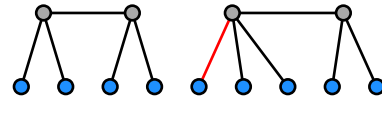
ID: 31 V_1^n
 n: 5 2 \leftarrow ID 28



ID: 112 $V_1^{n-1} \boxtimes V_1$
 n: 2 \leftarrow ID 110



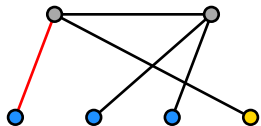
ID: 100 V_1^n
 n: 2 \leftarrow ID 84



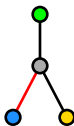
--- A2 case with weight 13 relations

relation groups: 2 ---

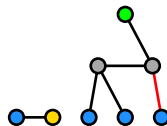
ID: 33 V_1^n
n: 8 5 2 \leftarrow ID 24



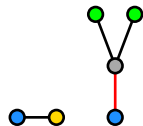
ID: 32 $V_1^{n-1} \boxtimes V_1$
n: 11 8 5 2



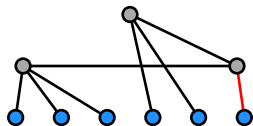
ID: 78 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2



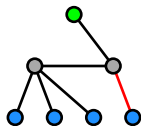
ID: 77 $V_1^{n-2} \boxtimes V_2$
n: 11 8 5 2



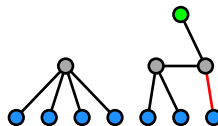
ID: 36 V_1^n
n: 5 2 \mapsto ID 39



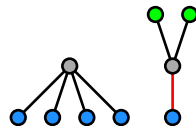
ID: 34 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 37



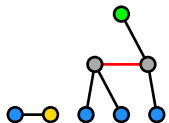
ID: 86 $V_1^{n-1} \boxtimes V_1$
n: 5 2



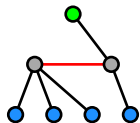
ID: 85 $V_1^{n-2} \boxtimes V_2$
n: 8 5 2



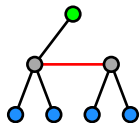
ID: 80 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 75



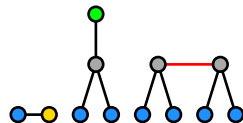
ID: 43 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 49



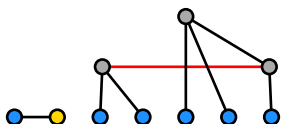
ID: 44 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 50



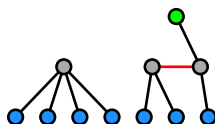
ID: 115 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 108



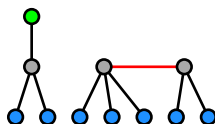
ID: 81 V_1^n
n: 5 2 \leftrightarrow ID 79



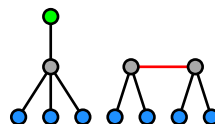
ID: 88 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 104



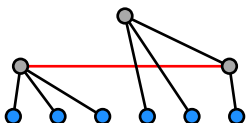
ID: 95 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 97



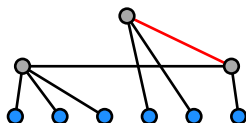
ID: 63 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 66



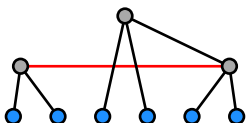
ID: 46 V_1^n
n: 5 2 \leftrightarrow ID 41



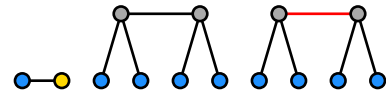
ID: 47 V_1^n
n: 5 2 \mapsto ID 51



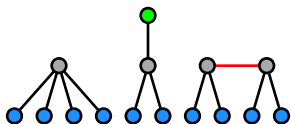
ID: 48 V_1^n
n: 5 2 \leftrightarrow ID 40



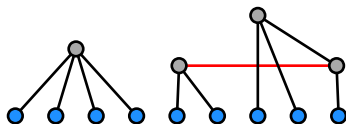
ID: 116 V_1^n
n: 2 \leftrightarrow ID 114



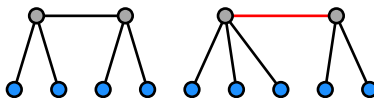
ID: 117 $V_1^{n-1} \boxtimes V_1$
n: 2 \mapsto ID 119



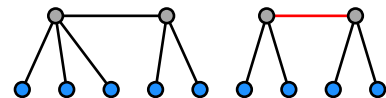
ID: 89 V_1^n
n: 2 \mapsto ID 105



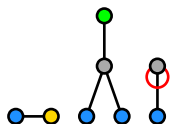
ID: 103 V_1^n
n: 2 \leftrightarrow ID 87



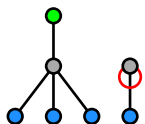
ID: 65 V_1^n
n: 2 \leftrightarrow ID 61



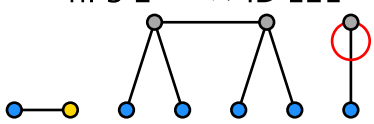
ID: 122 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2



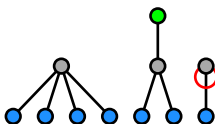
ID: 70 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \mapsto ID 73



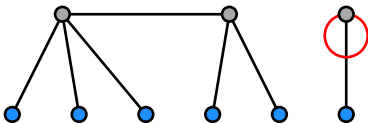
ID: 123 V_1^n
n: 5 2 \leftrightarrow ID 121



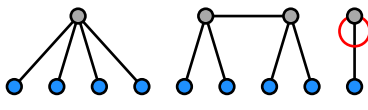
ID: 125 $V_1^{n-1} \boxtimes V_1$
n: 5 2 \mapsto ID 128



ID: 72 V_1^n
n: 5 2 \leftrightarrow ID 68

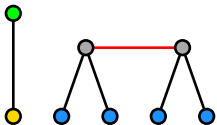


ID: 126 V_1^n
n: 2 \leftrightarrow ID 124

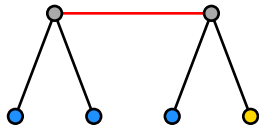


--- B,Birr cases with weight 11 relations relation groups: 2 ---

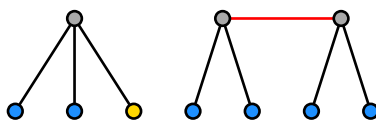
ID: 60 $V_1^{n-1} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 53



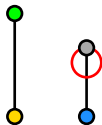
ID: 42 V_1^n
n: 8 5 2



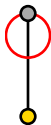
ID: 62 V_1^n
n: 5 2 \leftrightarrow ID 55



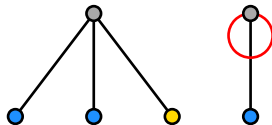
ID: 67 $V_1^{n-1} \boxtimes V_1$
n: 11 8 5 2



ID: 52 V_1^n
n: 11 8 5 2

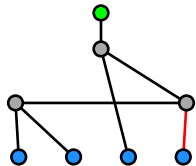


ID: 69 V_1^n
n: 8 5 2 \leftrightarrow ID 120

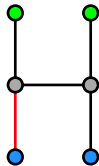


----- edges: 13-n graphs: 24 -----
 --- A2 case with weight 13 relations relation groups: 2 ---

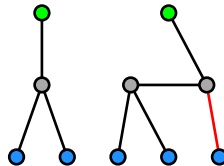
ID: 38 $V_{1^{n-1}} \boxtimes V_1$
 n: 8 5 2 \leftarrow ID 29



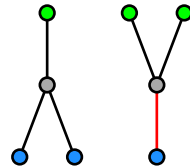
ID: 35 $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
 n: 11 8 5 2



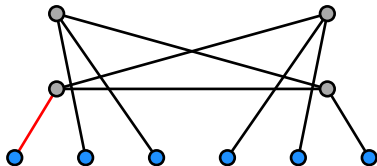
ID: 94 $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
 n: 8 5 2



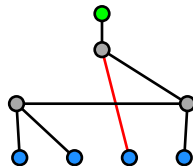
ID: 93 $V_{1^{n-3}} \boxtimes V_1 \boxtimes V_2$
 n: 11 8 5



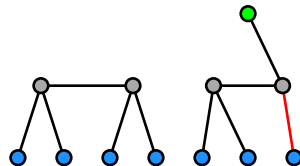
ID: 39 V_{1^n}
 n: 5 2 \leftarrow ID 36



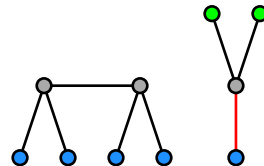
ID: 37 $V_{1^{n-1}} \boxtimes V_1$
 n: 8 5 2 \leftarrow ID 34



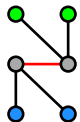
ID: 102 $V_{1^{n-1}} \boxtimes V_1$
 n: 5 2



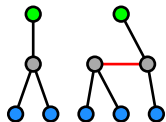
ID: 101 $V_{1^{n-2}} \boxtimes V_2$
 n: 8 5 2



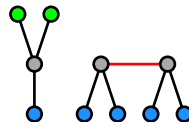
ID: 45 $V_{1^{n-2}} \boxtimes V_2$
n: 11 8 5 2



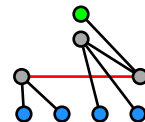
ID: 96 $V_{1^{n-2}} \boxtimes V_1 \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 91



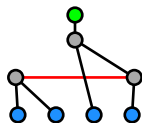
ID: 64 $V_{1^{n-2}} \boxtimes V_2$
n: 8 5 2 \leftrightarrow ID 57



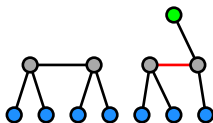
ID: 49 $V_{1^{n-1}} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 43



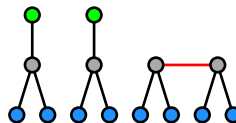
ID: 50 $V_{1^{n-1}} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 44



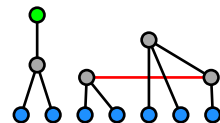
ID: 104 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 88



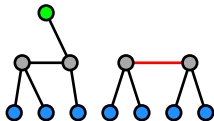
ID: 118 $V_{1^{n-2}} \boxtimes V_2$
n: 5 2 \leftrightarrow ID 111



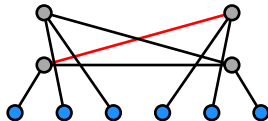
ID: 97 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 95



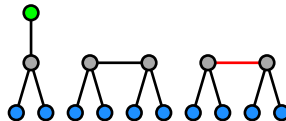
ID: 66 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 63



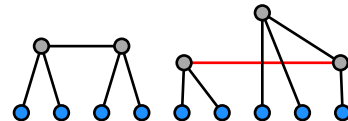
ID: 51 V_{1^n}
n: 5 2 \leftrightarrow ID 47



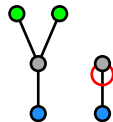
ID: 119 $V_{1^{n-1}} \boxtimes V_1$
n: 2 \leftrightarrow ID 117



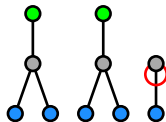
ID: 105 V_{1^n}
n: 2 \leftrightarrow ID 89



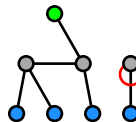
ID: 71 $V_{1^{n-2}} \boxtimes V_2$
n: 11 8 5 2



ID: 127 $V_{1^{n-2}} \boxtimes V_2$
n: 8 5 2



ID: 73 $V_{1^{n-1}} \boxtimes V_1$
n: 8 5 2 \leftrightarrow ID 70



ID: 128 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 \leftrightarrow ID 125

