

----- g,n: 6,5 graphs: 84 eliminated: 78 ----- Euler Characteristic (without resolving relations):
 ----- $2V_1^5 + 4V_1^4 \boxtimes V_1 - 1V_1^3 \boxtimes V_2 - 2V_1^3 \boxtimes V_1 \boxtimes V_1 - 1V_1^2 \boxtimes V_1 \boxtimes V_2$ -----
 ----- edges: 5 graphs: 3 -----
 ----- A3 case graphs: 3 -----

ID: 23 V_1^5
 \mapsto ID 46



ID: 24 V_1^5
 \mapsto ID 34

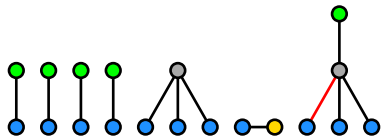


ID: 25 V_1^5
 \mapsto ID 39

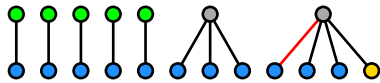


----- edges: 6 graphs: 19 -----
 ----- A3 case graphs: 12 -----

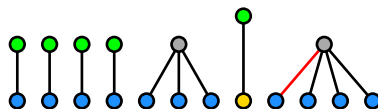
ID: 29 $V_1^4 \boxtimes V_1$
 \mapsto ID 78



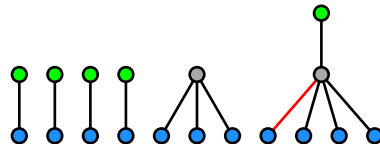
ID: 30 V_1^5
 \mapsto ID 73



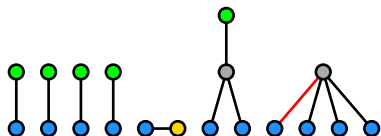
ID: 31 $V_1^4 \boxtimes V_1$
 \mapsto ID 77



ID: 32 $V_1^4 \boxtimes V_1$
 \mapsto ID 61



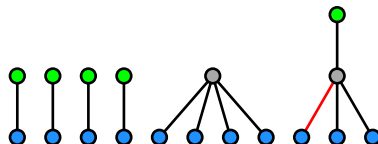
ID: 33 $V_1^4 \boxtimes V_1$
 \mapsto ID 82



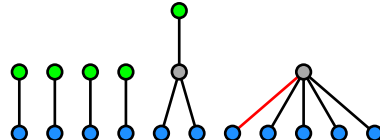
ID: 34 V_1^5
 \mapsto ID 24



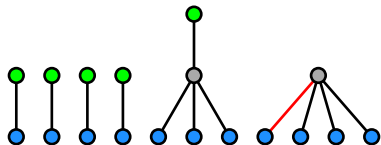
ID: 35 $V_1^4 \boxtimes V_1$
 \mapsto ID 62



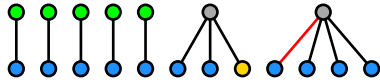
ID: 36 $V_1^4 \boxtimes V_1$
 \mapsto ID 64



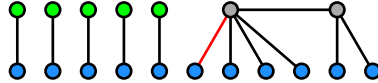
ID: 37 $V_1^4 \boxtimes V_1$
 \mapsto ID 65



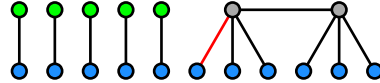
ID: 38 V_1^5
 \mapsto ID 84



ID: 39 V_1^5
 \mapsto ID 25



ID: 40 V_1^5
 \mapsto ID 66



----- B,Birr cases without weight 11 relations graphs: 7 -----

ID: 46 V_1^5

← ID 23



ID: 47 V_1^5

↦ ID 86



ID: 48 V_1^5

↦ ID 89



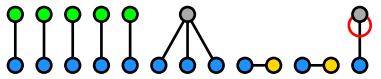
ID: 49 V_1^5

↦ ID 88



ID: 53 V_1^5

↦ ID 100



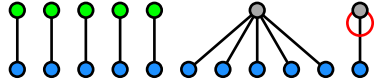
ID: 54 V_1^5

↦ ID 101



ID: 55 V_1^5

↦ ID 103

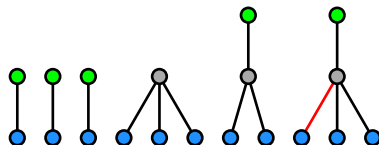


----- edges: 7 graphs: 40 -----
 ----- A3 case graphs: 10 -----

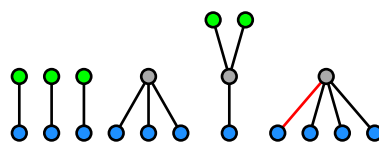
ID: 57 $V_1^3 \boxtimes V_2$
 \mapsto ID 113



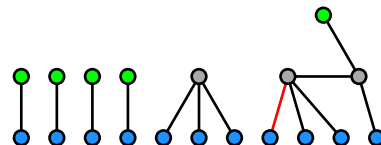
ID: 58 $V_1^3 \boxtimes V_1 \boxtimes V_1$
 \mapsto ID 115



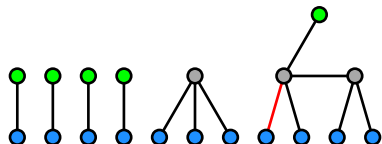
ID: 59 $V_1^3 \boxtimes V_2$
 \mapsto ID 114



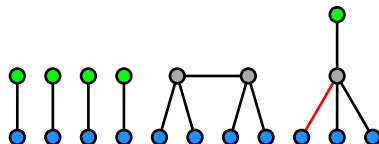
ID: 60 $V_1^4 \boxtimes V_1$
 \mapsto ID 110



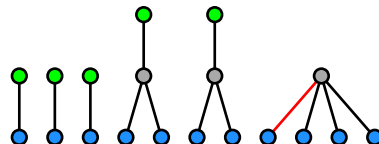
ID: 61 $V_1^4 \boxtimes V_1$
 \leftarrow ID 32



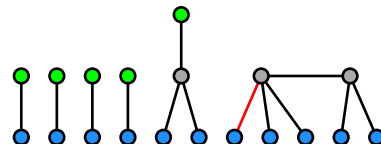
ID: 62 $V_1^4 \boxtimes V_1$
 \leftarrow ID 35



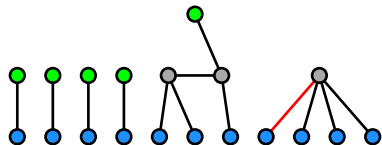
ID: 63 $V_1^3 \boxtimes V_2$
 \mapsto ID 118



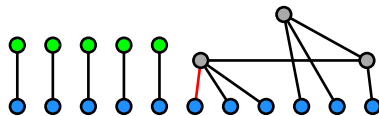
ID: 64 $V_1^4 \boxtimes V_1$
 \leftarrow ID 36



ID: 65 $V_1^4 \boxtimes V_1$
 \leftarrow ID 37



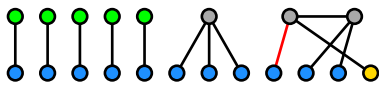
ID: 66 V_1^5
 \leftarrow ID 40



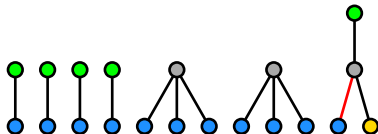
----- A2 case with weight 13 relations

relation groups: 2 -----

ID: 73 V_1^5
← ID 30



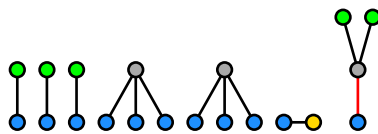
ID: 70 $V_1^4 \boxtimes V_1$



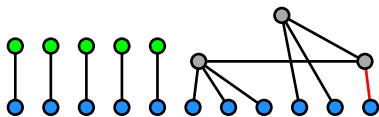
ID: 71 $V_1^4 \boxtimes V_1$
Redundant



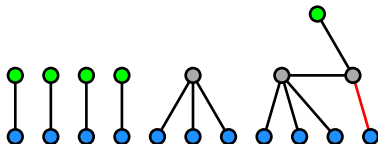
ID: 69 $V_1^3 \boxtimes V_2$
Redundant



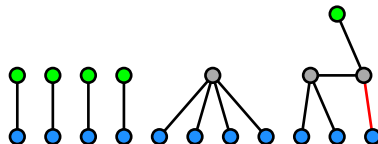
ID: 76 V_1^5
→ ID 112



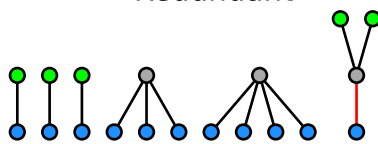
ID: 74 $V_1^4 \boxtimes V_1$
→ ID 109



ID: 75 $V_1^4 \boxtimes V_1$
Redundant

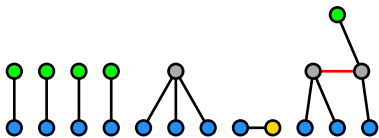


ID: 72 $V_1^3 \boxtimes V_2$
Redundant

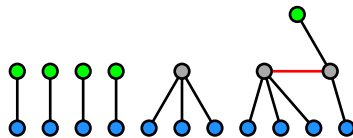


----- B,Birr cases without weight 11 relations graphs: 16 -----

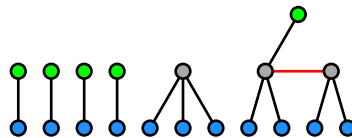
ID: 78 $V_1^4 \boxtimes V_1$
 \leftarrow ID 29



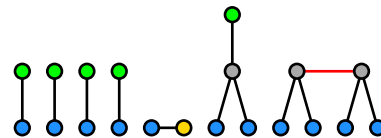
ID: 80 $V_1^4 \boxtimes V_1$
 \rightarrow ID 116



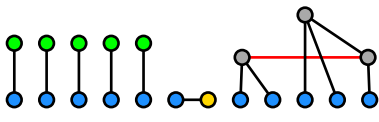
ID: 81 $V_1^4 \boxtimes V_1$
 \rightarrow ID 117



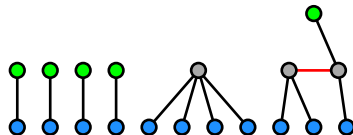
ID: 82 $V_1^4 \boxtimes V_1$
 \leftarrow ID 33



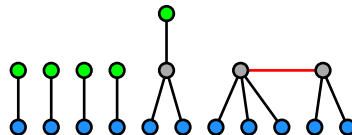
ID: 86 V_1^5
 \leftarrow ID 47



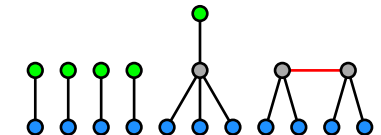
ID: 87 $V_1^4 \boxtimes V_1$
 \rightarrow ID 121



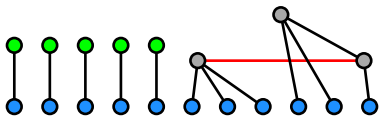
ID: 85 $V_1^4 \boxtimes V_1$
 \rightarrow ID 120



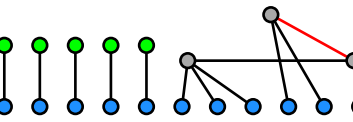
ID: 83 $V_1^4 \boxtimes V_1$
 \rightarrow ID 119



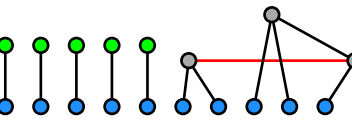
ID: 88 V_1^5
 \leftarrow ID 49



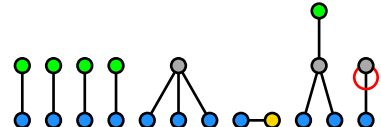
ID: 90 V_1^5
 \rightarrow ID 122



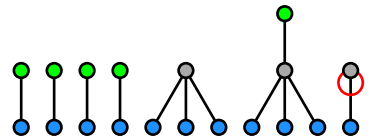
ID: 89 V_1^5
 \leftarrow ID 48



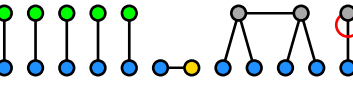
ID: 98 $V_1^4 \boxtimes V_1$



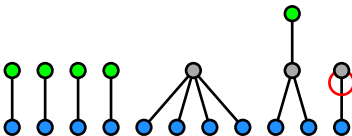
ID: 99 $V_1^4 \boxtimes V_1$
 \rightarrow ID 127



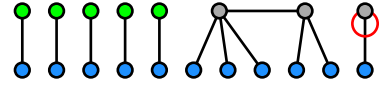
ID: 101 V_1^5
 \leftarrow ID 54



ID: 102 $V_1^4 \boxtimes V_1$
 \rightarrow ID 128

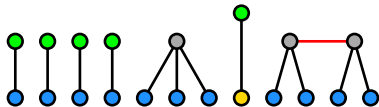


ID: 103 V_1^5
 \leftarrow ID 55

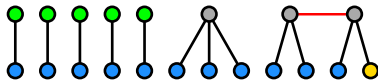


----- B,Birr cases with weight 11 relations relation groups: 2 -----

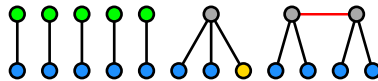
ID: 77 $V_1^4 \boxtimes V_1$
 \leftarrow ID 31



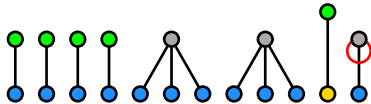
ID: 79 V_1^5
 Redundant



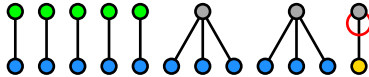
ID: 84 V_1^5
 \leftarrow ID 38



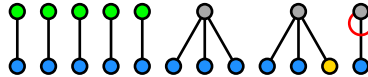
ID: 97 $V_1^4 \boxtimes V_1$



ID: 96 V_1^5
 Redundant

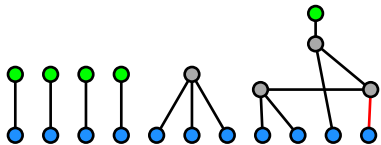


ID: 100 V_1^5
 \leftarrow ID 53

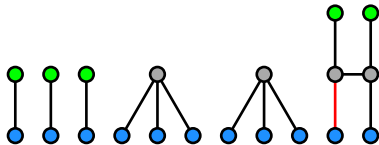


----- edges: 8 graphs: 22 -----
 ----- A2 case with weight 13 relations relation groups: 2 -----

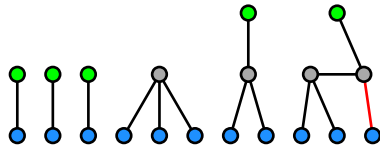
ID: 110 $V_1^4 \boxtimes V_1$
 \leftarrow ID 60



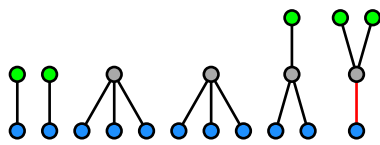
ID: 106 $V_1^3 \boxtimes V_1 \boxtimes V_1$



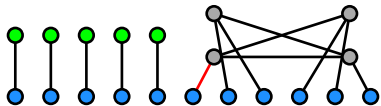
ID: 108 $V_1^3 \boxtimes V_1 \boxtimes V_1$
 Redundant



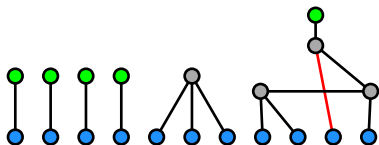
ID: 105 $V_1^2 \boxtimes V_1 \boxtimes V_2$
 Redundant



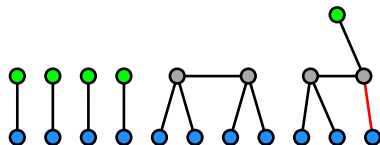
ID: 112 V_1^5
 \leftarrow ID 76



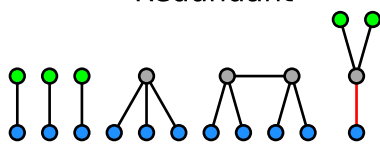
ID: 109 $V_1^4 \boxtimes V_1$
 \leftarrow ID 74



ID: 111 $V_1^4 \boxtimes V_1$
 Redundant

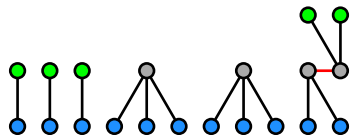


ID: 107 $V_1^3 \boxtimes V_2$
 Redundant

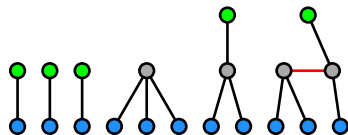


----- B,Birr cases without weight 11 relations graphs: 14 -----

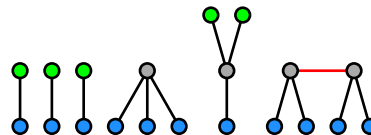
ID: 113 $V_1^3 \boxtimes V_2$
 \leftrightarrow ID 57



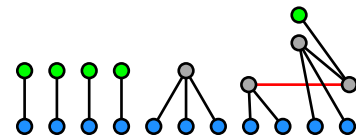
ID: 115 $V_1^3 \boxtimes V_1 \boxtimes V_1$
 \leftrightarrow ID 58



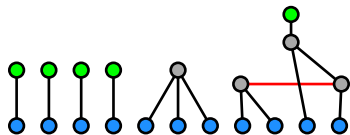
ID: 114 $V_1^3 \boxtimes V_2$
 \leftrightarrow ID 59



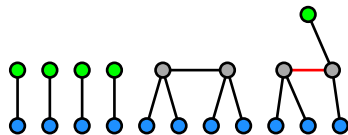
ID: 116 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 80



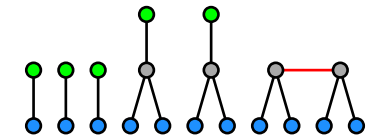
ID: 117 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 81



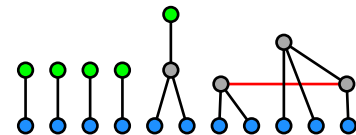
ID: 121 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 87



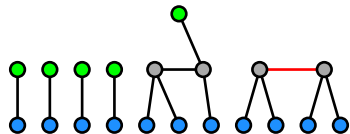
ID: 118 $V_1^3 \boxtimes V_2$
 \leftrightarrow ID 63



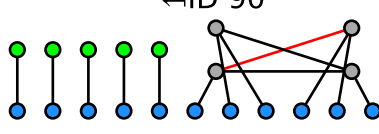
ID: 120 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 85



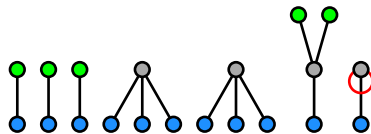
ID: 119 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 83



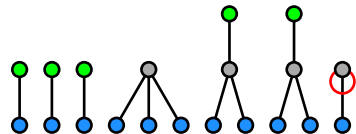
ID: 122 V_1^5
 \leftrightarrow ID 90



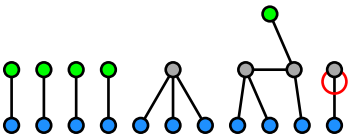
ID: 125 $V_1^3 \boxtimes V_2$



ID: 126 $V_1^3 \boxtimes V_2$



ID: 127 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 99



ID: 128 $V_1^4 \boxtimes V_1$
 \leftrightarrow ID 102

