

----- g,n: 8,2

graphs: 105

----- Euler Characteristic (without resolving relations):

----- $-2V_1^2 - 4V_1 \boxtimes V_1 + 1V_0 \boxtimes V_2 + 2V_0 \boxtimes V_1 \boxtimes V_1$ -----

----- edges: 8

graphs: 6

----- A3 case

graphs: 6

ID: 106 V_1^2
 \mapsto ID 113

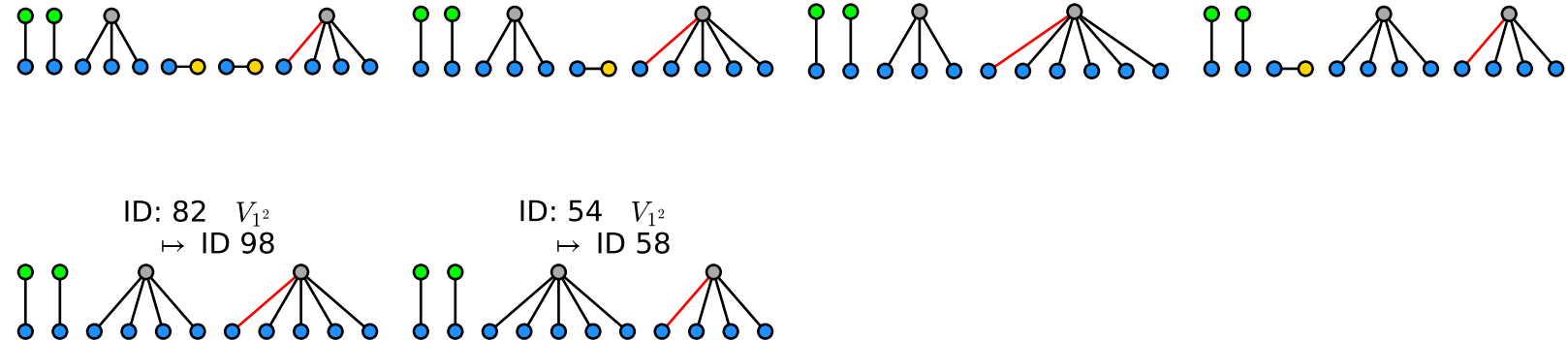
ID: 74 V_1^2
 \mapsto ID 76

ID: 23 V_1^2
 \mapsto ID 27

ID: 107 V_1^2
 \mapsto ID 109

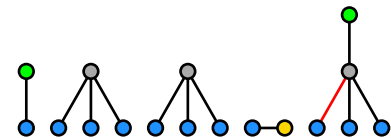
ID: 82 V_1^2
 \mapsto ID 98

ID: 54 V_1^2
 \mapsto ID 58

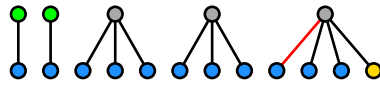


----- edges: 9 graphs: 28 -----
 ----- A3 case graphs: 17 -----

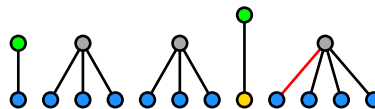
ID: 75 $V_1 \boxtimes V_1$
 \mapsto ID 80



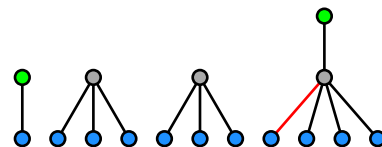
ID: 24 V_{1^2}
 \mapsto ID 33



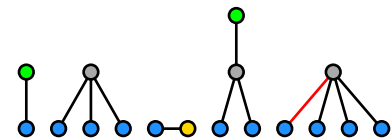
ID: 53 $V_1 \boxtimes V_1$
 \mapsto ID 60



ID: 25 $V_1 \boxtimes V_1$
 \mapsto ID 30



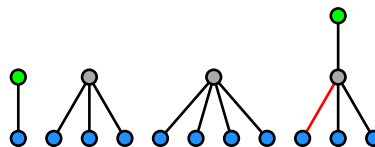
ID: 108 $V_1 \boxtimes V_1$
 \mapsto ID 115



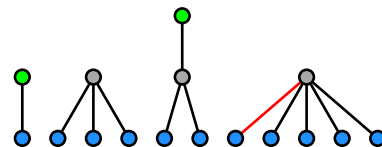
ID: 76 V_{1^2}
 \leftarrow ID 74



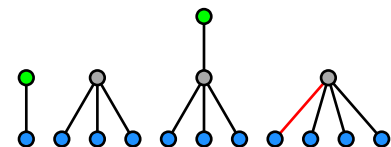
ID: 83 $V_1 \boxtimes V_1$
 \mapsto ID 99



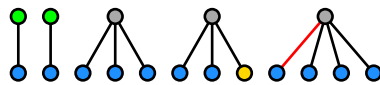
ID: 90 $V_1 \boxtimes V_1$
 \mapsto ID 92



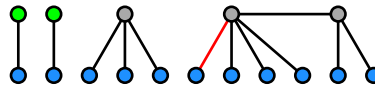
ID: 56 $V_1 \boxtimes V_1$
 \mapsto ID 59



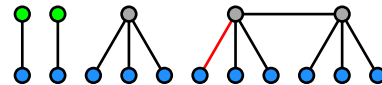
ID: 55 V_{1^2}
 \mapsto ID 62



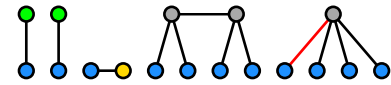
ID: 27 V_{1^2}
 \leftarrow ID 23



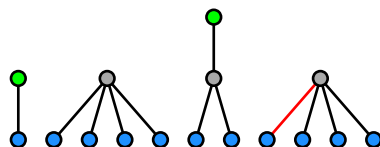
ID: 28 V_{1^2}
 \mapsto ID 31



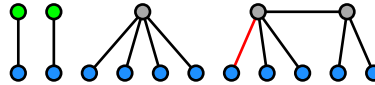
ID: 109 V_{1^2}
 \leftarrow ID 107



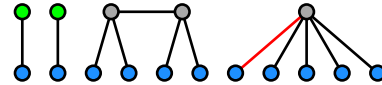
ID: 110 $V_1 \boxtimes V_1$
 \mapsto ID 112



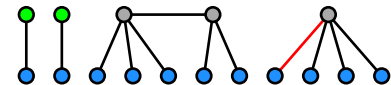
ID: 84 V_{1^2}
 \mapsto ID 100



ID: 98 V_{1^2}
 \leftarrow ID 82

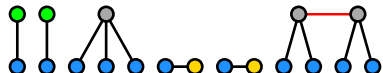


ID: 58 V_{1^2}
 \leftarrow ID 54



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

ID: 113 V_{1^2}
 \leftrightarrow ID 106



ID: 79 V_{1^2}
 \mapsto ID 81



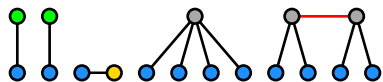
ID: 40 V_{1^2}
 \mapsto ID 48



ID: 41 V_{1^2}
 \mapsto ID 46



ID: 114 V_{1^2}
 \mapsto ID 116



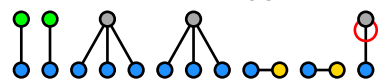
ID: 87 V_{1^2}
 \mapsto ID 103



ID: 61 V_{1^2}
 \mapsto ID 65



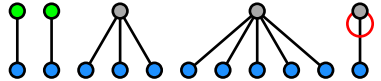
ID: 120 V_{1^2}
 \mapsto ID 69



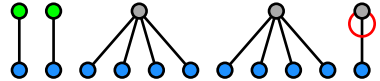
ID: 121 V_{1^2}
 \mapsto ID 123



ID: 68 V_{1^2}
 \mapsto ID 72

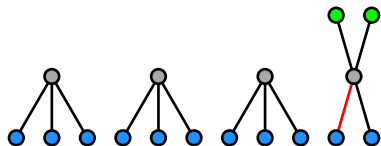


ID: 124 V_{1^2}
 \mapsto ID 126

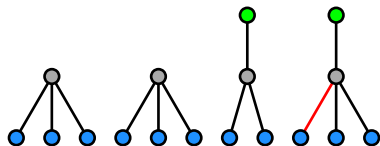


----- edges: 10 graphs: 48 -----
 ----- A3 case graphs: 12 -----

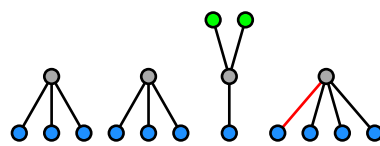
ID: 26 V_2



ID: 91 $V_1 \boxtimes V_1$
 \mapsto ID 96



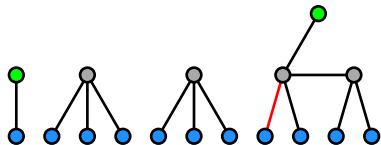
ID: 57 V_2
 \mapsto ID 64



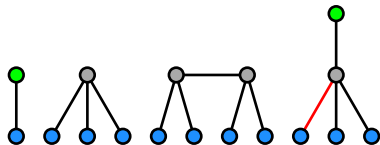
ID: 29 $V_1 \boxtimes V_1$
 \mapsto ID 38



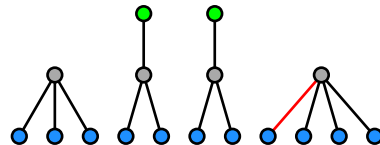
ID: 30 $V_1 \boxtimes V_1$
 \leftarrow ID 25



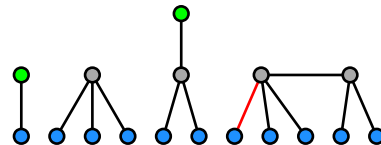
ID: 99 $V_1 \boxtimes V_1$
 \leftarrow ID 83



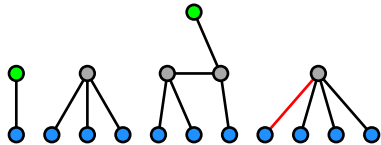
ID: 111 V_2
 \mapsto ID 118



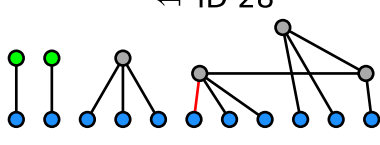
ID: 92 $V_1 \boxtimes V_1$
 \leftarrow ID 90



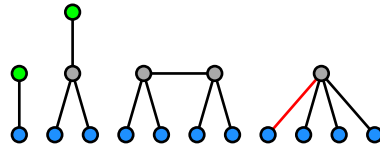
ID: 59 $V_1 \boxtimes V_1$
 \leftarrow ID 56



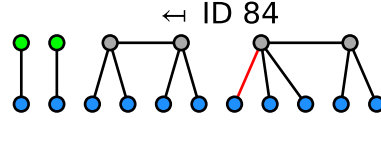
ID: 31 V_1^2
 \leftarrow ID 28



ID: 112 $V_1 \boxtimes V_1$
 \leftarrow ID 110



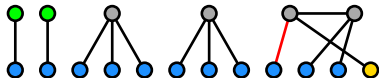
ID: 100 V_1^2
 \leftarrow ID 84



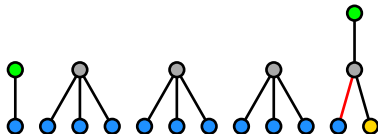
----- A2 case with weight 13 relations

relation groups: 2 -----

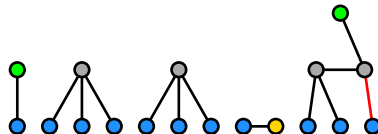
ID: 33 V_1^2
 \leftarrow ID 24



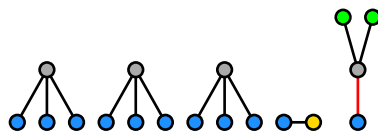
ID: 32 $V_1 \boxtimes V_1$



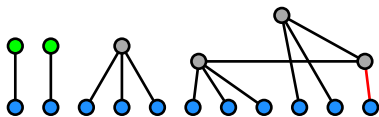
ID: 78 $V_1 \boxtimes V_1$



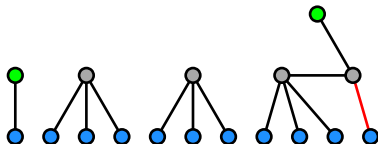
ID: 77 V_2



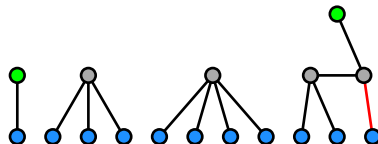
ID: 36 V_1^2
 \mapsto ID 39



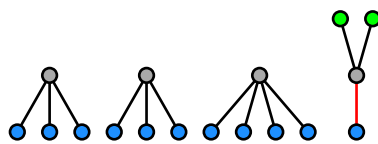
ID: 34 $V_1 \boxtimes V_1$
 \mapsto ID 37



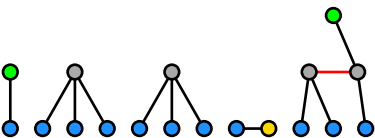
ID: 86 $V_1 \boxtimes V_1$



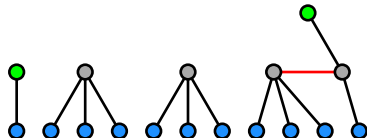
ID: 85 V_2



ID: 80 $V_1 \boxtimes V_1$
 \leftrightarrow ID 75



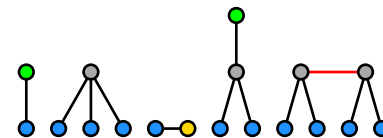
ID: 43 $V_1 \boxtimes V_1$
 \mapsto ID 49



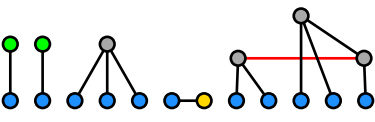
ID: 44 $V_1 \boxtimes V_1$
 \mapsto ID 50



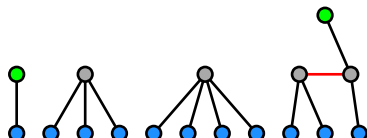
ID: 115 $V_1 \boxtimes V_1$
 \leftrightarrow ID 108



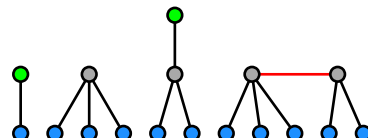
ID: 81 V_1^2
 \leftrightarrow ID 79



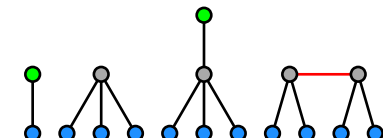
ID: 88 $V_1 \boxtimes V_1$
 \mapsto ID 104



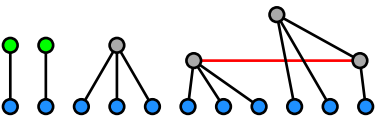
ID: 95 $V_1 \boxtimes V_1$
 \mapsto ID 97



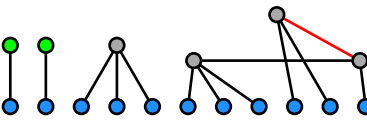
ID: 63 $V_1 \boxtimes V_1$
 \mapsto ID 66



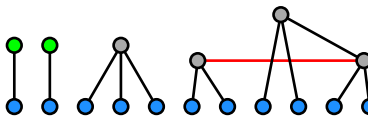
ID: 46 V_1^2
 \leftrightarrow ID 41



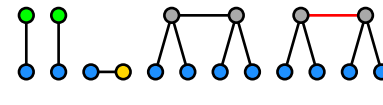
ID: 47 V_1^2
 \mapsto ID 51



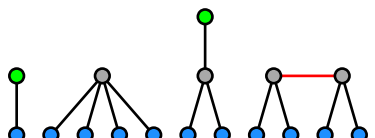
ID: 48 V_1^2
 \leftrightarrow ID 40



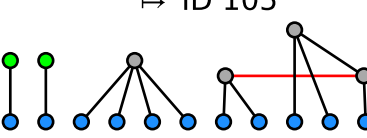
ID: 116 V_1^2
 \leftrightarrow ID 114



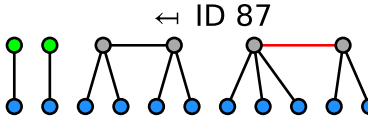
ID: 117 $V_1 \boxtimes V_1$
 \mapsto ID 119



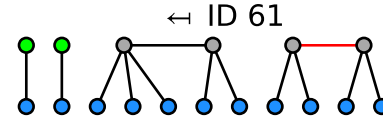
ID: 89 V_1^2
 \mapsto ID 105



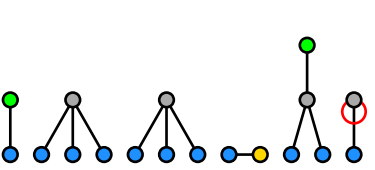
ID: 103 V_1^2
 \leftrightarrow ID 87



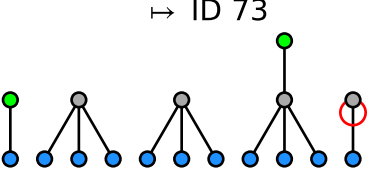
ID: 65 V_1^2
 \leftrightarrow ID 61



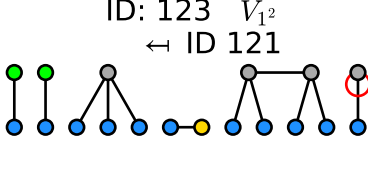
ID: 122 $V_1 \boxtimes V_1$



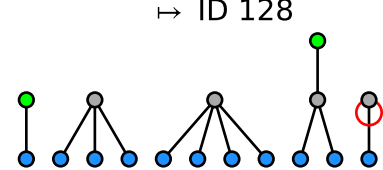
ID: 70 $V_1 \boxtimes V_1$
 \mapsto ID 73



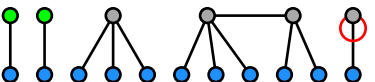
ID: 123 V_1^2
 \leftrightarrow ID 121



ID: 125 $V_1 \boxtimes V_1$
 \mapsto ID 128



ID: 72 V_1^2
 \leftrightarrow ID 68

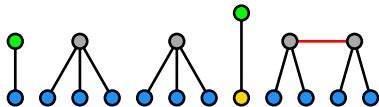


ID: 126 V_1^2
 \leftrightarrow ID 124

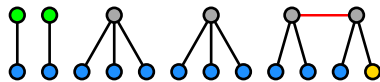


----- B,Birr cases with weight 11 relations relation groups: 2 -----

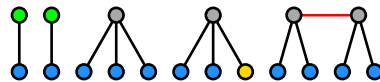
ID: 60 $V_1 \boxtimes V_1$
 \leftarrow ID 53



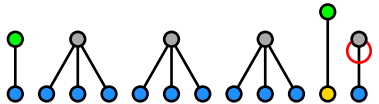
ID: 42 V_1^2



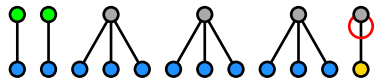
ID: 62 V_1^2
 \leftarrow ID 55



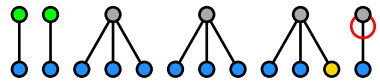
ID: 67 $V_1 \boxtimes V_1$



ID: 52 V_1^2

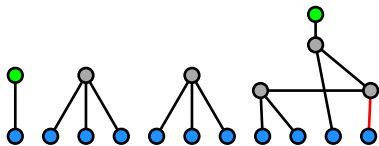


ID: 69 V_1^2
 \leftarrow ID 120

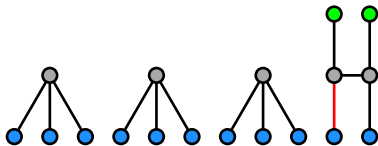


----- edges: 11 graphs: 23 -----
 ----- A2 case with weight 13 relations relation groups: 2 -----

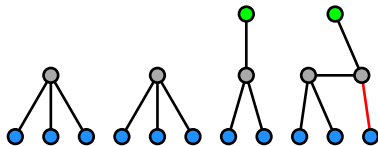
ID: 38 $V_1 \boxtimes V_1$
 \leftarrow ID 29



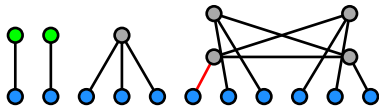
ID: 35 $V_1 \boxtimes V_1$



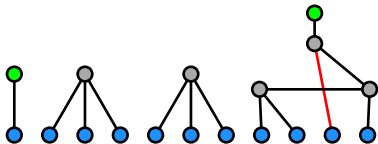
ID: 94 $V_1 \boxtimes V_1$



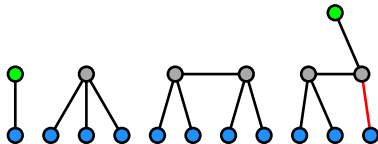
ID: 39 V_1^2
 \leftarrow ID 36



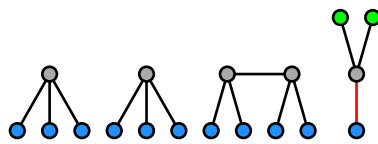
ID: 37 $V_1 \boxtimes V_1$
 \leftarrow ID 34



ID: 102 $V_1 \boxtimes V_1$

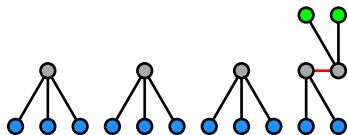


ID: 101 V_2

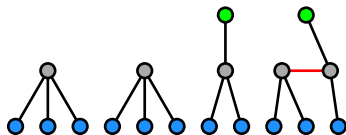


----- B,Birr cases without weight 11 relations graphs: 16 -----

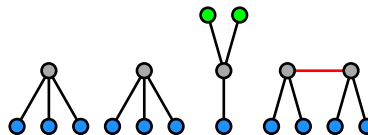
ID: 45 V_2



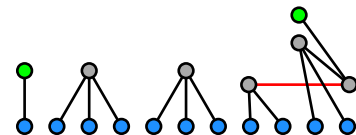
ID: 96 $V_1 \boxtimes V_1$
 \leftarrow ID 91



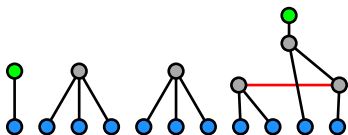
ID: 64 V_2
 \leftarrow ID 57



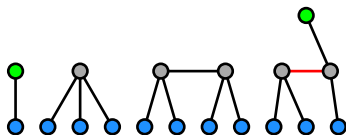
ID: 49 $V_1 \boxtimes V_1$
 \leftarrow ID 43



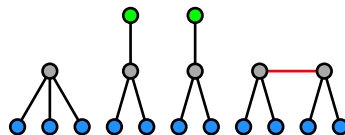
ID: 50 $V_1 \boxtimes V_1$
 \leftarrow ID 44



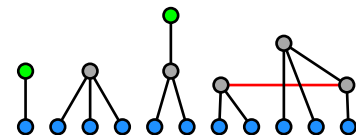
ID: 104 $V_1 \boxtimes V_1$
 \leftarrow ID 88



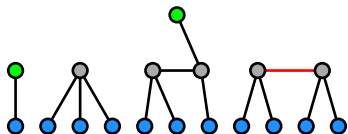
ID: 118 V_2
 \leftarrow ID 111



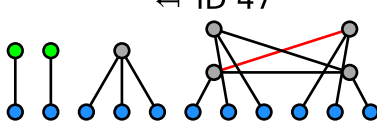
ID: 97 $V_1 \boxtimes V_1$
 \leftarrow ID 95



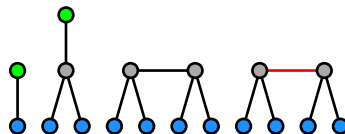
ID: 66 $V_1 \boxtimes V_1$
 \leftarrow ID 63



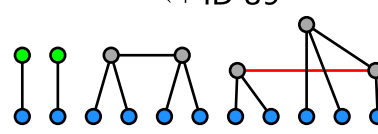
ID: 51 V_1^2
 \leftarrow ID 47



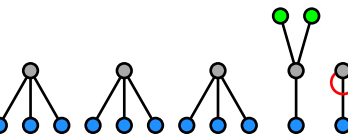
ID: 119 $V_1 \boxtimes V_1$
 \leftarrow ID 117



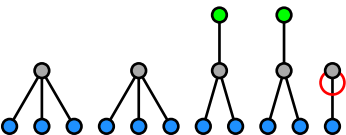
ID: 105 V_1^2
 \leftarrow ID 89



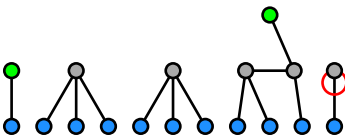
ID: 71 V_2



ID: 127 V_2



ID: 73 $V_1 \boxtimes V_1$
 \leftarrow ID 70



ID: 128 $V_1 \boxtimes V_1$
 \leftarrow ID 125

