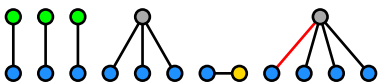
---------- g,n: 7,3 graphs: 20 ----------

------ Euler Characteristic (without resolving relations): $-1V_{1^3}+2V_{1^2}\boxtimes V_1+1V_1\boxtimes V_2$ ------

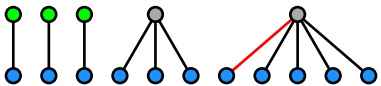
--------- edges: 7 graphs: 3 ---------

------- A3 case graphs: 3 -------

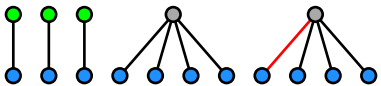
ID: 3 V_{1^3} $\mapsto$ ID 10



ID: 4 V_{1^3} $\mapsto$ ID 8



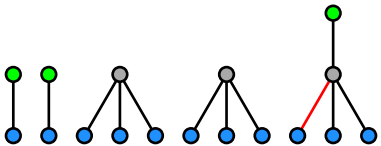
ID: 5 V_{1^3} $\mapsto$ ID 9



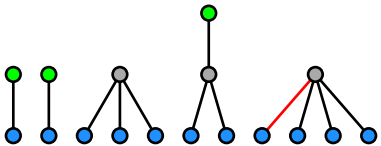
--------- edges: 8 graphs: 9 ---------

------- A3 case graphs: 4 -------

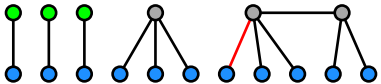
ID: 6 $V_{1^2} \boxtimes V_1$ $\mapsto$ ID 17



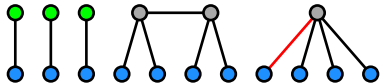
ID: 7 $V_{1^2} \boxtimes V_1$ $\mapsto$ ID 18



ID: 8 V_{1^3} $\mapsto$ ID 4

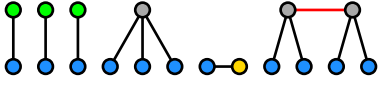


ID: 9 V_{1^3} $\mapsto$ ID 5

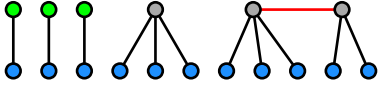


------- B,Birr cases without weight 11 relations graphs: 5 -------

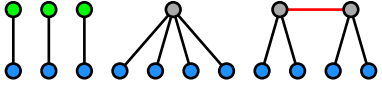
ID: 10 V_{1^3} ↤ ID 3



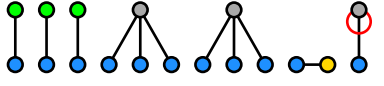
ID: 11 V_{1^3} ↦ ID 19



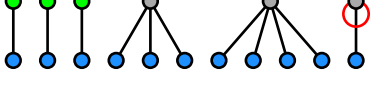
ID: 12 V_{1^3} ↦ ID 20



ID: 13 V_{1^3}

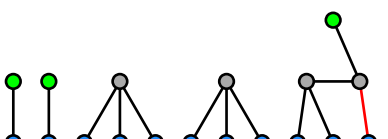


ID: 14 V_{1^3} ↦ ID 22

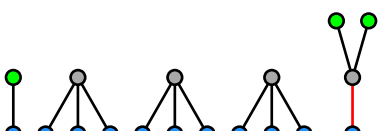


--------- edges: 9 graphs: 8 ---------
------- A2 case with weight 13 relations relation groups: 1 -------

ID: 16 $V_{1^2} \boxtimes V_1$

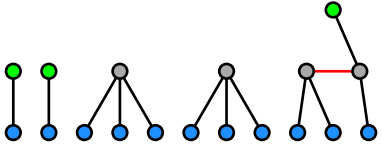


ID: 15 $V_1 \boxtimes V_2$

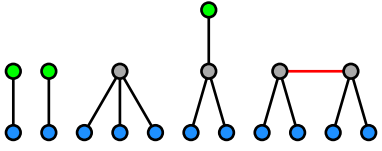


------- B,Birr cases without weight 11 relations graphs: 6 -------

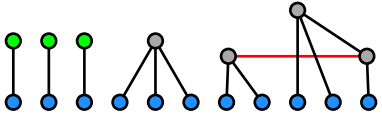
ID: 17 $V_{1^2} \boxtimes V_1$ $\mapsto$ ID 6



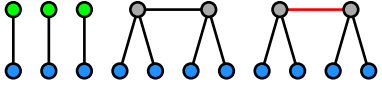
ID: 18 $V_{1^2} \boxtimes V_1$ $\mapsto$ ID 7



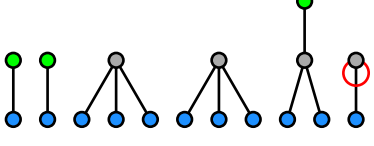
ID: 19 V_{1^3} $\mapsto$ ID 11



ID: 20 V_{1^3} $\mapsto$ ID 12



ID: 21 $V_{1^2} \boxtimes V_1$



ID: 22 V_{1^3} $\mapsto$ ID 14