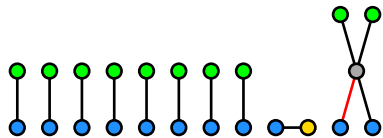---------- g,n: 3,10   graphs: 56   ---------- Euler Characteristic (without resolving relations):

--------- $-2V_{1^{10}} - 1V_{1^8} \boxtimes V_{1^2} + 3V_{1^8} \boxtimes V_1 \boxtimes V_1 + 1V_{1^7} \boxtimes V_3 - 2V_{1^7} \boxtimes V_1 \boxtimes V_2 - 1V_{1^7} \boxtimes V_1 \boxtimes V_1 \boxtimes V_1$ ---------

--------- edges: 2   graphs: 9   ---------

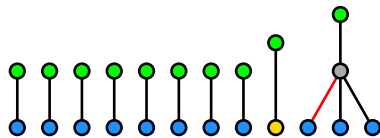------- A3 case   graphs: 4   -------

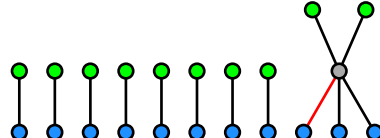ID: 277 $V_{1^8} \boxtimes V_2$

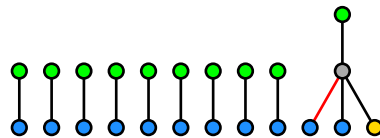ID: 571 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

ID: 133 $V_{1^8} \boxtimes V_2$

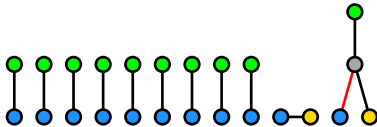ID: 132 $V_{1^9} \boxtimes V_1$

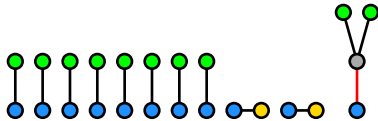------- A2 case with weight 13 relations   relation groups: 1 -------
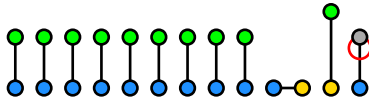
ID: 283 $V_1 {}^9 \boxtimes V_1$

ID: 473 $V_1 {}^8 \boxtimes V_2$

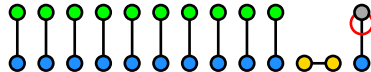------- B,Birr cases with weight 11 relations   relation groups: 1 -------
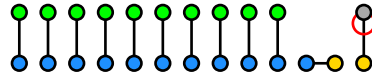
ID: 442 $V_1{}^9 \boxtimes V_1$

ID: 259 $V_1{}^{10}$

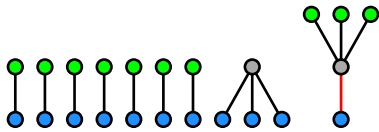ID: 303 $V_1{}^{10}$

---------- edges: 3   graphs: 26   ----------
------- A3 case   graphs: 6 -------
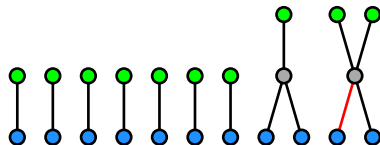
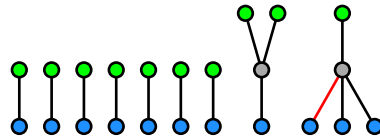ID: 134 $V_{1^7} \boxtimes V_3$

ID: 337 $V_{1^7} \boxtimes V_1 \boxtimes V_2$
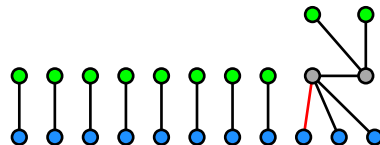
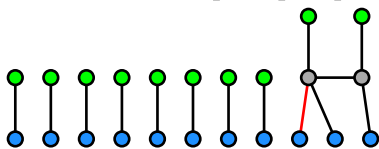ID: 575 $V_{1^7} \boxtimes V_2 \boxtimes V_1$

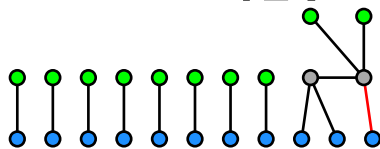ID: 144 $V_{1^8} \boxtimes V_2$

ID: 145 $V_{1^8} \boxtimes V_1 \boxtimes V_1$
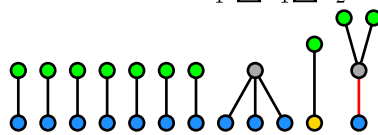
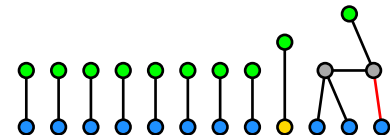ID: 146 $V_{1^8} \boxtimes V_2$

------- A2 case with weight 13 relations   relation groups: 4 -------
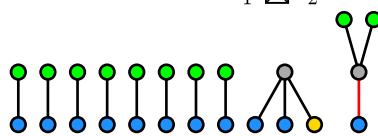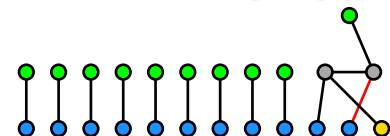
ID: 592 $V_{1^8} \boxtimes V_1 \boxtimes V_1$
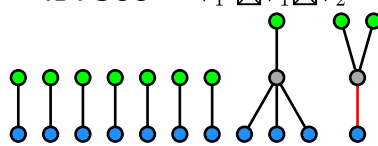
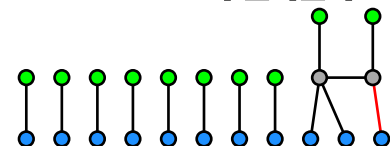ID: 585 $V_{1^7} \boxtimes V_1 \boxtimes V_2$

ID: 160 $V_{1^9} \boxtimes V_1$

ID: 587 $V_{1^8} \boxtimes V_2$

ID: 161 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

ID: 588 $V_{1^7} \boxtimes V_1 \boxtimes V_2$
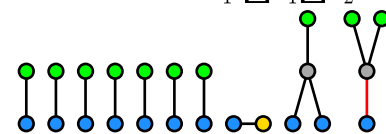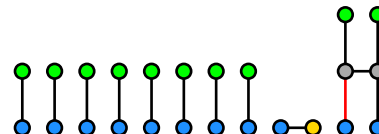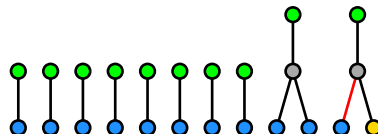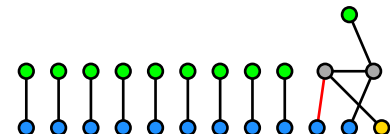
ID: 159 $V_{1^9} \boxtimes V_1$

ID: 343 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

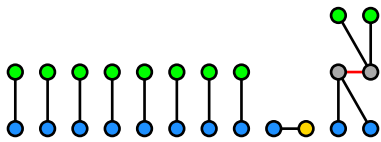ID: 286 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

ID: 489 $V_{1^7} \boxtimes V_1 \boxtimes V_2$

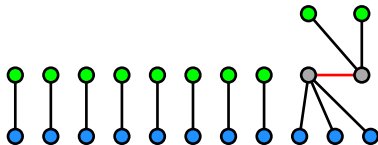------- B,Birr cases without weight 11 relations   graphs: 5 -------
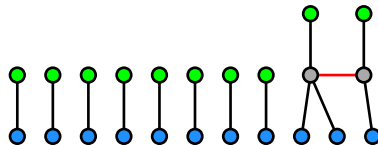
ID: 296 $V_1{}^8 \boxtimes V_2$

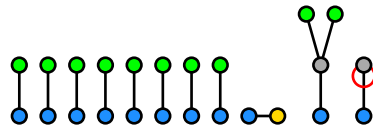ID: 196 $V_1{}^8 \boxtimes V_2$

ID: 197 $V_1{}^8 \boxtimes V_1 \boxtimes V_1$
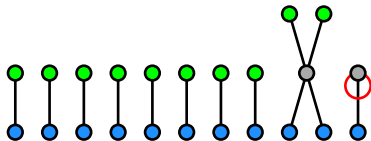
ID: 446 $V_1{}^8 \boxtimes V_2$

ID: 264 $V_1{}^8 \boxtimes V_2$

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

ID: 606 $V_{1^8} \boxtimes V_1 \boxtimes V_1$
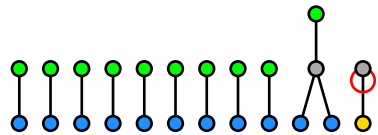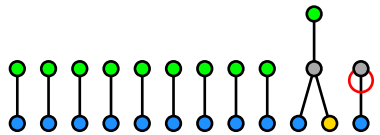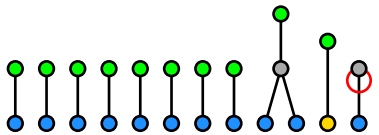
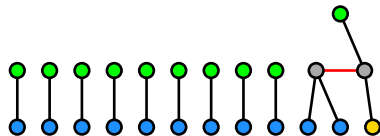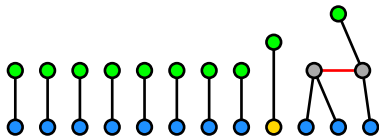ID: 195 $V_{1^9} \boxtimes V_1$

ID: 456 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

ID: 263 $V_{1^9} \boxtimes V_1$

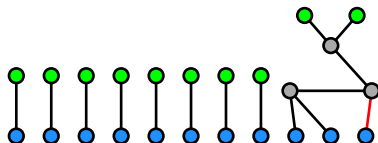ID: 363 $V_{1^9} \boxtimes V_1$

--------- edges: 4   graphs: 21   ---------
------- A2 case with weight 13 relations   relation groups: 3 -------
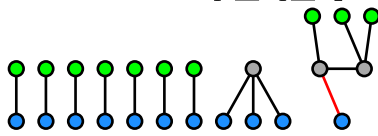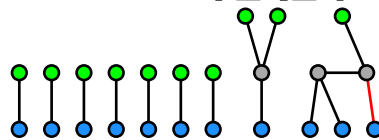
ID: 173 $V_{1^8} \boxtimes V_2$
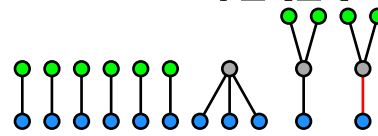
ID: 162 $V_{1^7} \boxtimes V_1 \boxtimes V_2$

ID: 596 $V_{1^7} \boxtimes V_2 \boxtimes V_1$
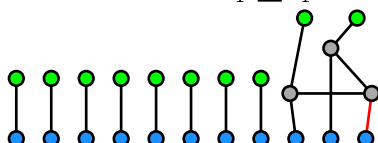
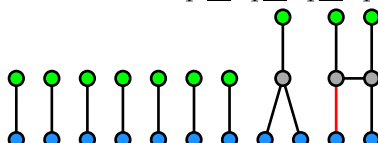ID: 589 $V_{1^6} \boxtimes V_2 \boxtimes V_2$

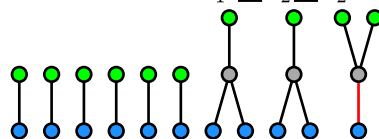ID: 175 $V_{1^8} \boxtimes V_{1^2}$

ID: 346 $V_{1^7} \boxtimes V_1 \boxtimes V_1 \boxtimes V_1$
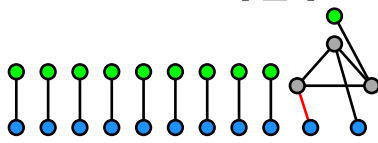
ID: 521 $V_{1^6} \boxtimes V_2 \boxtimes V_2$
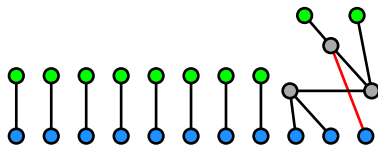
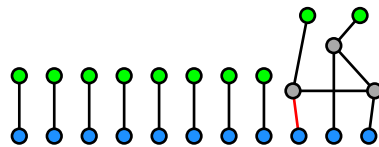ID: 167 $V_{1^9} \boxtimes V_1$

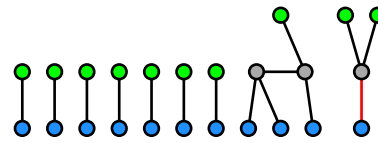ID: 172 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

ID: 174 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

ID: 591 $V_{1^7} \boxtimes V_1 \boxtimes V_2$
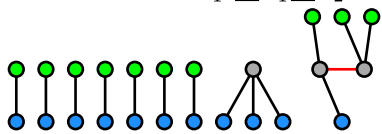
------- B,Birr cases without weight 11 relations   graphs: 10 -------
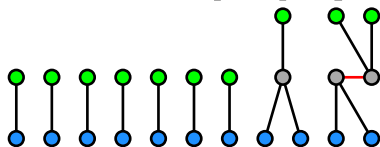
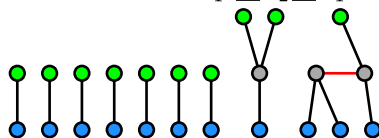ID: 198 $V_{1^7} \boxtimes V_1 \boxtimes V_2$

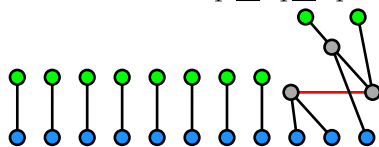ID: 356 $V_{1^7} \boxtimes V_1 \boxtimes V_2$

ID: 610 $V_{1^7} \boxtimes V_2 \boxtimes V_1$
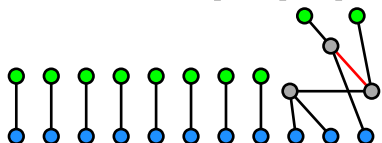
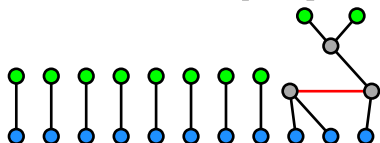ID: 214 $V_{1^8} \boxtimes V_1 \boxtimes V_1$

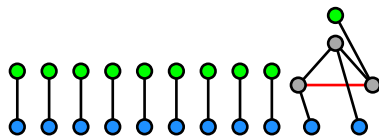ID: 215 $V_{1^8} \boxtimes V_1 \boxtimes V_1$
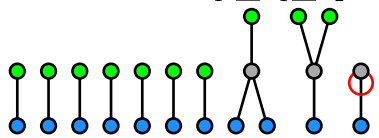
ID: 216 $V_{1^8} \boxtimes V_2$
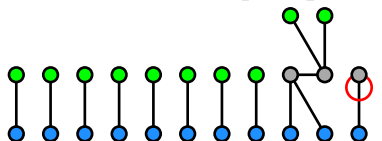
ID: 207 $V_{1^9} \boxtimes V_1$

ID: 460 $V_{1^7} \boxtimes V_1 \boxtimes V_2$

ID: 270 $V_{1^8} \boxtimes V_2$

ID: 271 $V_{1^8} \boxtimes V_2$