---- excess: 3   (g,n): (2, 11), (4, 8), (6, 5), (8, 2)   graphs: 106   eliminated+redundant: 100 ----
--------   edges: 10-n   graphs: 6   --------
--- A3 case   graphs: 6 ---

ID: 23 V_1^n
n: 5 2 $\mapsto$ ID 46

ID: 24 V_1^n
n: 5 2 $\mapsto$ ID 34

ID: 25 V_1^n
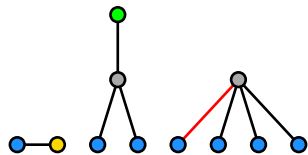n: 5 2 $\mapsto$ ID 39

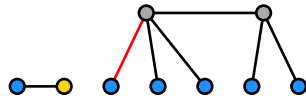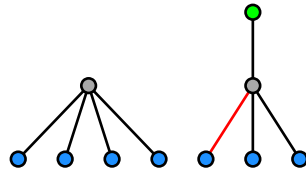---------- edges: 11-n   graphs: 28   ----------
--- A3 case   graphs: 17 ---

ID: 33 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 $\mapsto$ ID 82
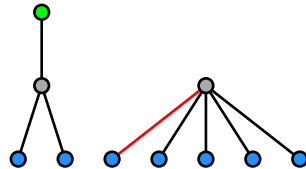
ID: 34 V_{1^n}
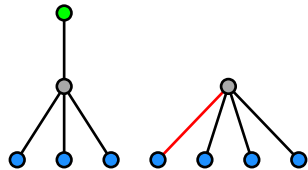n: 5 2 $\hookleftarrow$ID 24

ID: 35 $V_{1^{n-1}} \boxtimes V_1$
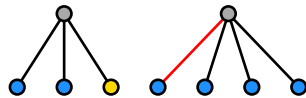n: 5 2 $\mapsto$ ID 62

ID: 36 $V_{1^{n-1}} \boxtimes V_1$
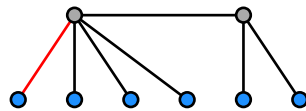n: 5 2 $\mapsto$ ID 64

ID: 37 $V_{1^{n-1}} \boxtimes V_1$
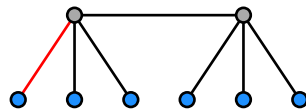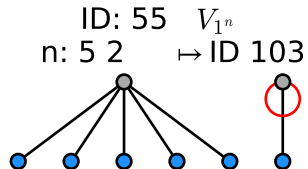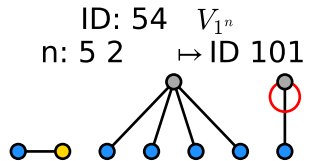n: 5 2 $\mapsto$ ID 65

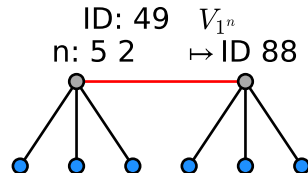ID: 38 V_{1^n}
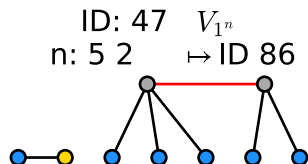n: 5 2 $\mapsto$ ID 84
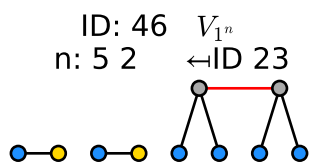
ID: 39 V_{1^n}
n: 5 2 $\hookleftarrow$ID 25

ID: 40 V_{1^n}
n: 5 2 $\mapsto$ ID 66

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

ID: 46 V_{1^n}
n: 5 2 $\leftarrow$ID 23

ID: 47 V_{1^n}
n: 5 2 $\mapsto$ ID 86

ID: 48 V_{1^n}
n: 5 2 $\mapsto$ ID 89

ID: 49 V_{1^n}
n: 5 2 $\mapsto$ ID 88

ID: 54 V_{1^n}
n: 5 2 $\mapsto$ ID 101

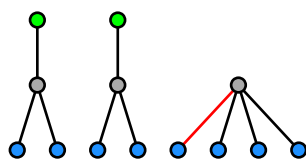ID: 55 V_{1^n}
n: 5 2 $\mapsto$ ID 103
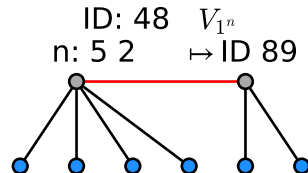
--------- edges: 12-n   graphs: 48   ---------
--- A3 case   graphs: 12 ---
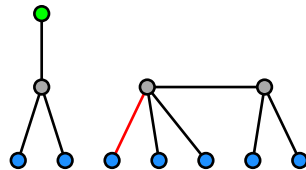
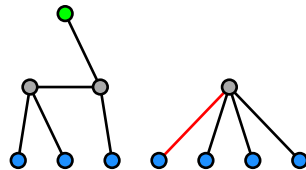ID: 62 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2   ←ID 35
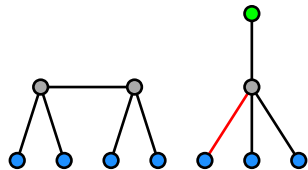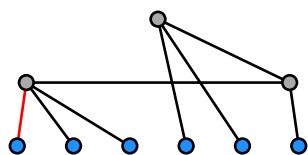
ID: 63 $V_{1^{n-2}} \boxtimes V_2$
n: 5 2   ↦ ID 118

ID: 64 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2   ←ID 36

ID: 65 $V_{1^{n-1}} \boxtimes V_1$
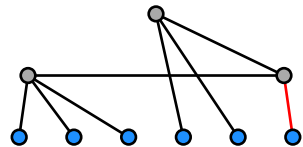n: 5 2   ←ID 37

ID: 66 V_{1^n}
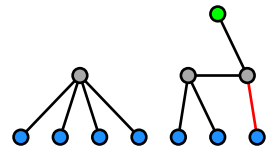n: 5 2   ←ID 40

--- A2 case with weight 13 relations   relation groups: 2 ---

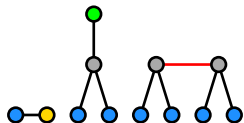ID: 76 V_{1^n}

n: 5 2 $\mapsto$ ID 112
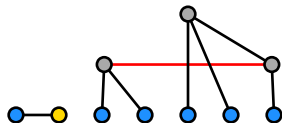
ID: 75 $V_{1^{n-1}} \boxtimes V_1$

n: 5 2   Redundant

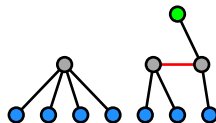--- B,Birr cases without weight 11 relations   graphs: 22 ---
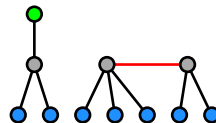
ID: 82 $V_{1^{n-1}} \boxtimes V_1$
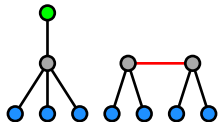n: 5 2   ←ID 33

ID: 86 V_{1^n}
n: 5 2   ←ID 47
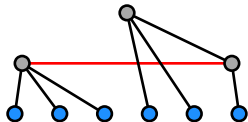
ID: 87 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2   ↦ ID 121

ID: 85 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2   ↦ ID 120

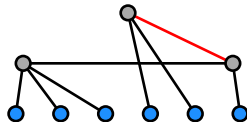ID: 83 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2   ↦ ID 119
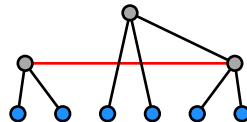
ID: 88 V_{1^n}
n: 5 2   ←ID 49

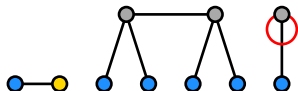ID: 90 V_{1^n}
n: 5 2   ↦ ID 122

ID: 89 V_{1^n}
n: 5 2   ←ID 48

ID: 101 V_{1^n}
n: 5 2   ←ID 54
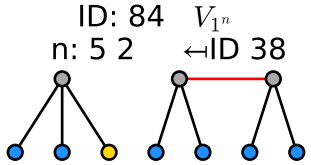
ID: 102 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2   ↦ ID 128
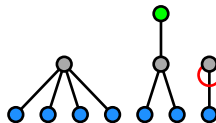
ID: 103 V_{1^n}
n: 5 2   ←ID 55
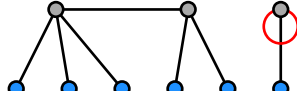
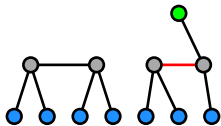--- B,Birr cases with weight 11 relations   relation groups: 2 ---

ID: 84 V_{1^n}
n: 5 2   ←ID 38

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

ID: 112 V_{1^n}
n: 5 2 ↩ID 76

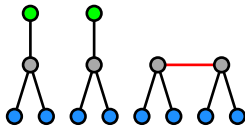ID: 111 $V_{1^{n-1}} \boxtimes V_1$
n: 5 2 Redundant
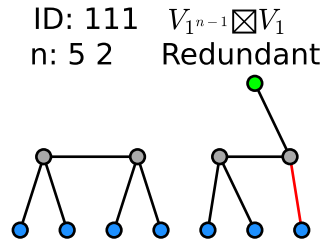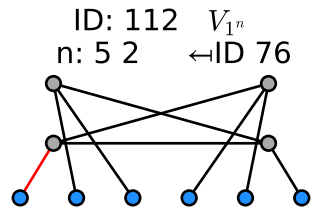
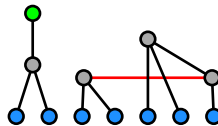--- B,Birr cases without weight 11 relations   graphs: 16 ---

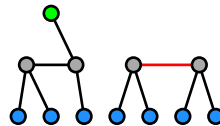ID: 121 $V_1{}^{n-1} \boxtimes V_1$
n: 5 2   ↤ID 87

ID: 118 $V_1{}^{n-2} \boxtimes V_2$
n: 5 2   ↤ID 63
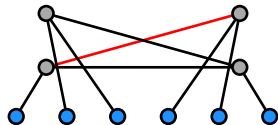
ID: 120 $V_1{}^{n-1} \boxtimes V_1$
n: 5 2   ↤ID 85

ID: 119 $V_1{}^{n-1} \boxtimes V_1$
n: 5 2   ↤ID 83

ID: 122 $V_1{}^{n}$
n: 5 2   ↤ID 90

ID: 128 $V_1{}^{n-1} \boxtimes V_1$
n: 5 2   ↤ID 102