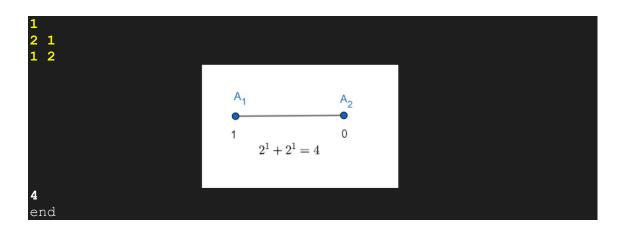
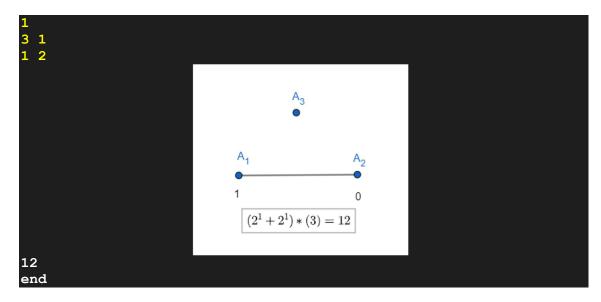
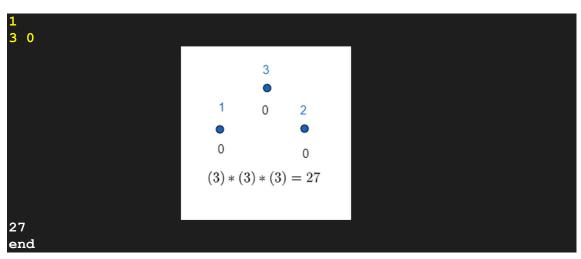
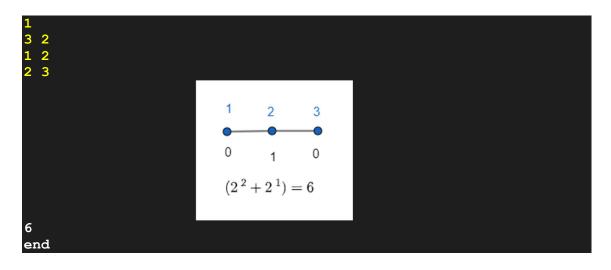
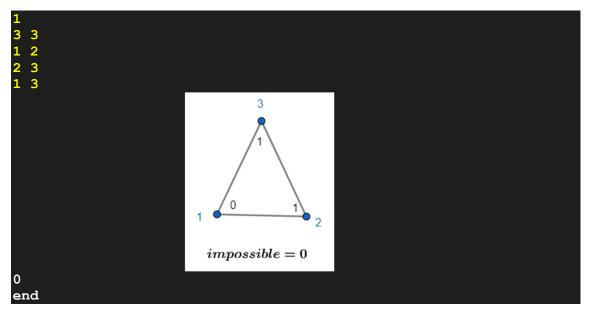
## Input and output samples:

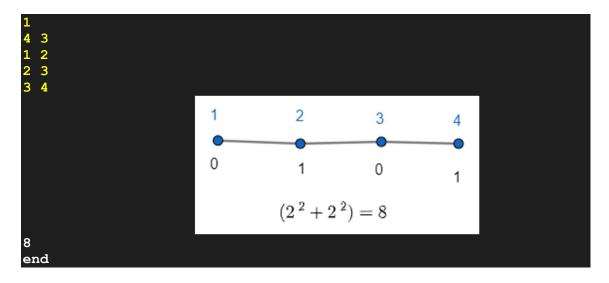






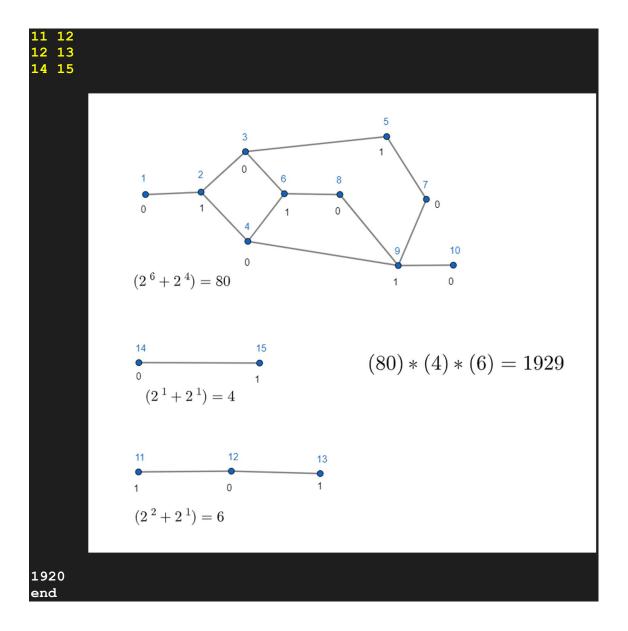






```
1
12 9
1 2
2 3
3 4
5 6
6 7
7 8
8 9
10 11
11 12
              1
                                    2
                                                         3
                                                                             4
              0
                                                         0
                                     1
                                                                              1
                                      (2^2 + 2^2) = 8
                   5
                                   6
                                                 7
                                                              8
                                                                        9
                    0
                                                 0
                                                              1
                                                                        0
                                                                                   (8)*(12)*(6) = 576
                                   (2^3 + 2^2) = 12
                    10
                                         11
                                                            12
                   0
                                        1
                                                            0
                                 (2^2 + 2^1) = 6
576
end
```

```
1
15 15
1 2
2 3
2 4
4 6
3 5
6 8
5 7
8 9
7 9
9 10
4 9
3 6
```



## multiple test:

```
3
2 1
1 2
4 6
1 2
1 3
1 4
2 3
2 4
3 4
15 15
1 2
2 3
```

