Problem C. Graph

Description

The country contains N cities numbered from 1 to N and M undirected roads connecting pairs of cities. There are some queries. Each query is represented by two numbers: L and R , meaning that all the cities whose number is between L and R(L and R are included) are safe, and other cities are not safe. We define city A can reach city B if and only if they are both safe and there exists a path from A to B that the cities on the path are all safe.

For each query, you need to figure out the number of pairs of cities that can reach each other under the condition given by the query.

Input

First line contains one number T which means the number of test cases.

For each test case, first line contains three numbers, above mentioned N , M and Q.

Next M lines, each line contains two integers: X, Y (X != Y) which means there is a road between city X and city Y (1 <= X,Y <= N).

Next Q lines, each line contains two numbers: L, R which indicates an query(1 <= L,R <= N, L <= R).

T <= 5, N , M <= 50000, Q <= 100000

Output

For each test case, output Q lines, each line contains the answer of the correspondent query.

Example Input

```
1
6 6 4
1 2
2 3
2 6
1 5
2 4
4 5
1 4
3 6
2 6
3 4
```

Example Output

```
6
1
10
0
```