3286 - Toby and Graph

Description

Toby has an undirected graph where not necessarily all vertices are connected to each other. As a result, we could have some disjoint sets of interconnected vertices. Toby is a curious and smart dog, so he is wondering about the following question: how many new sets can we get after joining **any two** initial sets?

Input specification

The first line contains a single integer **T** denoting the number of test cases **(T <= 200)**. Each case in the first line contains two integers **n (1 <= n <= 10^4)** and **m (0 <= m <= n-1)**, the number of vertices and the number of edges respectively. The next **m** lines contains two integers separated by a single space **a, b(1 <= a <= b <= n)** meaning that vertex **a** is connected to vertex **b**. Each vertex is enumerated from 1 to **n**.

Output specification

Print the answer for each case in a separate line.

Sample input

```
2
7 4
2 3
4 5
5 6
4 6
1 0
```

Sample output

```
6
0
```

Hint(s)

First input:

- Initially we have 4 sets: A = {1}, B = {7}, C = {2,3}, D = {4,5,6}.
- We can get 6 new SETS: A U B = {1,7}, A U C = {1,2,3}, A U D = {1,4,5,6}, B U C = {2,3,7}, B U D = {4,5,6,7}, C U D= {2,3,4,5,6}.
- Toby cares the number of new sets so the answer is 6.

Second input:

- Initially we have 1 set: A = {1}.
- Is impossible to get other new set, so the answer is 0.

Source	2015 UTP-COLOMBIA Internal Programming Contest VI - Jhon Jiménez
Added by	**huhumope**
Addition date	2015-05-21
Time limit (ms)	0
Test limit (ms)	0
Memory limit (kb)	0
Output limit (mb)	64
Size limit (bytes)	0
Enabled languages	Bash C C# C++ C++11 Java JavaScript-NodeJS Pascal Perl PHP Prolog Python Ruby Text