

Everyday Runner

Description

As a handsome runner, Tmt514 likes to run around the Tomato city everyday.

The beautiful Tomato city can be treated as an undirected simple graph with n nodes and m edges. Tmt514 wants to start his daily training at some node v , put his bag there, and then run over 4 edges which forms a cycle (otherwise, he may forget his bag). It's too boring to run over the same training route twice, so he would like to know how many different training routes in Tomato city. Note that we treat two routes start from same node, and form the same cycle with different directions as same routes. Check sample input/output if you are still confused.

Input

The first line contains a integer T indicating the total number of test cases. Each test case begins with two integer n, m , denoting the number of nodes and edges in Tomato city. Following m lines, each contains two integers a_i, b_i , which means there is an edge (a_i, b_i) in Tomato city.

- $T \leq 25$
- $1 \leq n \leq 514$
- $0 \leq m \leq \frac{n(n-1)}{2}$
- $0 \leq a_i, b_i \leq n - 1$

Output

For each test case, print one integer denoting how many different training routes in Tomato city.

Sample Input

```
2
4 4
0 1
1 2
2 3
3 0
5 9
0 1
0 2
0 3
0 4
1 2
1 3
1 4
2 3
2 4
```

Sample Output

```
4
36
```