Having a simple undirected graph $G = (V, E)$, a triangle is defined as a triple (v_1, v_2, v_3) where $v_1, v_2, v_3 \in V$ and $(v_1, v_2) \in E$ for all $1 \le i, j \le 3$ and $i \ne j$. In this problem, you are given an undirected graph and asked to count all the triangles in this graph. You are assured that there is no edge in this graph that is the member of more than 2 triangles.

Input

The first line of input contains an integer $T \le 250$, which is the number of test cases. Each test case begins with a line containing two integers $1 \le n \le 3000$ and m which are the number of vertices and the number of edges in the graph respectively. The next m lines contain two integers $1 \le i, j \le 3000$ indicating that there is an edge between vertex i and vertex j.

Tip for C++ Programmers: Any attempt to use `ifstream` to read the input will exceed the time limit for this problem. Use `scanf` instead.

Output

Output for each test case consists of one line containing the number of triangles in the specified graph of the test case.

Sample Input

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

Sample Output

```
4
```