Mine clearing

You are working for a humanitarian organisation, responsible for clearing roads of explosive devices. Your vehicles are very heavy, and so as to avoid damaging the roads, you should travel on each road only once. You may assume that all cities are connected to each other by some sequence of road(s). However, some roads might be very narrow, meaning that you can only travel down them in one direction.

Input

The input file contains multiple problem instances. The first line of the file contains a single number, `P`, denoting the number of problems contained in the file. The following lines contain problem instances, with the first line of each problem instance containing two numbers seperated by a space, namely the number of villages (`M`), and number of roads (`N`) in the country.

The next `N` lines consist of space separated pairs of numbers between `0` and `M-1` (inclusive). These represent the village from which a road starts, and the village where i ends.

Output

Your program should output `1` if it is possible to travel along all the roads while visiting each road a single time. Otherwise, your program should output `-1`.

Sample Input

```
2
10 30
0 8
0 9
0 1
1 0
1 2
1 3
2 1
2 3
2 6
3 1
3 2
3 4
3 6
3 9
4 3
4 5
5 4
5 6
6 2
6 3
6 5
6 7
7 8
7 6
8 0
8 9
8 7
9 8
9 0
9 3
10 27
0 9
0 2
0 1
1 0
1 2
2 0
```

```
2 1
2 3
2 9
3 2
3 5
3 6
4 5
5 8
5 3
5 4
5 6
6 3
6 7
7 8
7 6
8 9
8 5
8 7
9 8
9 0
9 2
```

Sample Output

```
1
-1
```

You have 0 submissions to this assessment.

Deadline: 2020-03-13 17:00

Additional Help

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