Connecting The Dots

Story And Question

Oğuz and Batuhan are really bored. As they are done with playing same games, they decide to create a game. After they draw random points on a paper and connect some pairs, they ask each other whether they can draw a line such that it has to come back to it's beginning position after passing all lines only one time, without any hand lifting. Can you help them with this game?

Input Format

First line contains an integer, Q, denoting the number of queries.

Each of the Q queries contain:

First line contains two space-separated integers, denoting the total number of points, N and the total number of lines, C.

Next C lines contain two space-separated integers, denoting A and B points which connected with each other.

Constraints

1<=Q<250

1<=N<5000

1<=C<20000

Output Format

For each query, print 1 if there is a way of connecting every point without lifting hand and coming back to its beginning position, otherwise -1.

Sample Input

2

5 8

1 2

2 3

3 4

4 5

5 1

5 2

5 3

4 2

5 7

1 2

2 3

4 5

5 1

5 2

5 3

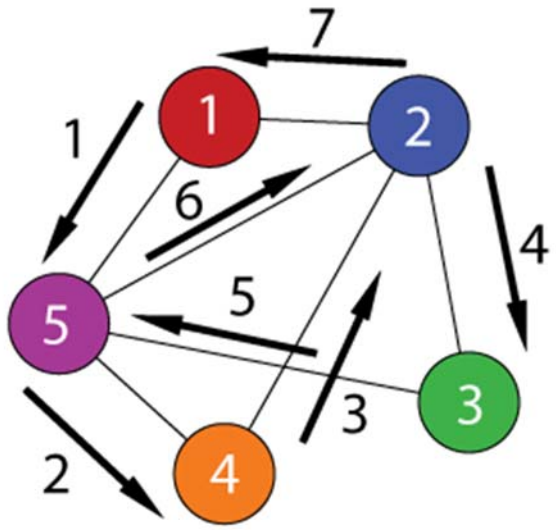
4 2

Sample Output

-1

1

Explanation



For the first query it is impossible so -1 is printed.

For the second query it is possible if 2-4-5-1-2-3-5-2 route is followed, answer is 1.