Problem B
Score Board

Input file: *testdata.in*
Time limit: 10 seconds

Problem Description

In a round-robin tournament, each participant plays every other participant once. Suppose in each play, winner will get one score while loser gets zero, and there is no draw. At the end of a tournament, the participant(s) with the highest score is a champion, and let "champion score" be the score of the champion. Now given a scoreboard of an in-progress tournament, please find the minimum possible value of champion score when the tournament ends.

Input Format

The input begins with a single positive integer, which indicates the number of test cases to follow.

In each test case, the first line contains two positive integers N, M, where $1 \leq N \leq 100$ indicates the number of participants, and M indicates the number of plays have been played. Participants are numbered from 0 to $N-1$. The followings are M lines, where each line contains 2 integers w, s, indicating that the play between player w and player s has been played and w won the play.

Output Format

For each test case, please output a single line containing a single positive integer, which is the minimum possible value of champion score at the end of the tournament.

Sample Input

```
1
3 2
0 1
2 1
```

Sample Output

```
2
```