Cow Contest

Description

N (1 ≤ N ≤ 100) cows, conveniently numbered 1..N, are participating in a programming contest. As we all know, some cows code better than others. Each cow has a certain constant skill rating that is unique among the competitors.

The contest is conducted in several head-to-head rounds, each between two cows. If cow A has a greater skill level than cow B (1 ≤ A ≤ N; 1 ≤ B ≤ N; A ≠ B), then cow A will always beat cow B.

Farmer John is trying to rank the cows by skill level. Given a list the results of M (1 ≤ M ≤ 4,500) two-cow rounds, determine the number of cows whose ranks can be precisely determined from the results. It is guaranteed that the results of the rounds will not be contradictory.

Input

There are multiple inputs, in each set of input:

* Line 1: Two space-separated integers: N and M
* Lines 2..M+1: Each line contains two space-separated integers that describe the competitors and results (the first integer, A, is the winner) of a single round of competition: A and B

Output

A single integer representing the number of cows whose ranks can be determined for each set of input.

Sample Input

```
5 5
4 3
4 2
3 2
1 2
2 5
```

Sample Output

```
2
```