I. Pom Gana

Score: 1

CPU: 1s
Memory: 1024MB

This year the ACM ICPC World Final will be hosted by the country of Gana, which is popular for its weird road system. Gana consists of **N** city and **M** roads. All the roads in the country are unidirectional. That's why people often get stuck in some dead end cities and had to use a helicopter to return from there. In Gana, those cities are called Pom city. A city X is a Pom city if a person starts his/her journey from X, he/she cannot return to X again using one or more roads.

So the ACM ICPC headquarter wanted to know how many Pom city are there in Gana.

Input

First line of the input contains a single integer **T (<=100)**, the number of test cases to follow.
First line of each test case contains space- separated integers **N** and **M (1<=N<=100, 0<=M<=N*N)**, the number of cities and roads respectively. Next **M** lines will contain two space-separated integers **U** and **V (1<=U,V<=N, U!=V)**, such that there is a unidirectional road from city **U** to city **V**.

Output

For each test case, print the test case number and number of Pom city in Gana.

Sample

Input	Output
2 4 4 1 2 2 3 3 1 1 4 4 5 1 2 2 3 3 1 1 4 4 1	Case 1: 1 Case 2: 0