

Rohan and the Greatest Realm

In the era of middle earth, all kingdoms fight with each other in pursuit of becoming the Greatest Realm of them all. Tired of all those wars and bloodshed, Théoden King of Rohan organises a meeting with the Kings of all Realms. In the meeting it is decided that a competition will be organised comprising of one great warrior of each realm. Whoever wins the competition will be the Greatest Realm of them all. However there is a catch. Each match between warriors is the last man standing match, i.e. loser will be the one who dies in the match and winner will continue playing the competition.

There are N realms and each one sends 1 warrior. Task of scheduling matches is given to Legolas, the Elf, as he is unbiased. He has to pick the warriors for the first match and based on the result he can schedule the next matches and so on. So winner is decided not only on the basis of skills and strength, but also on the schedule. Legolas is aware of the strengths of each warrior and hence knows the result of matches before hand based on their strength. He also knows that competition can be scheduled in a way such that a warrior plays matches with those who will lose against him, making sure that a particular realm wins.

If a warrior n_1 would lose with n_2 and n_2 would lose with n_3 , that does not mean that n_1 would lose with n_3 . Also no two warriors have same strength.

Now you have to tell Legolas that for how many realms, there is a schedule that ensures their win.

Input Specification:

First line contains an integer t (≤ 10) [number of tests to solve].

In the first line of each test: N ($1 \leq N \leq 1000$) - the number of realms in middle-earth.

It is followed by N lines.

i th line contains an integer M , the number of warriors having strengths more than i th warrior ($1 \leq i \leq N$),

followed by M integers, indicating the warriors having more strength than i separated by spaces.

Also each warrior is numbered from 1 to N .

Output Specification:

For each test your program should output a single integer - the number of realms, for which it is possible to make sure that they win.

Example:

Input:

1
3
2 3 2
1 3
0

Output:

1

For warrior 1, two matches can be scheduled with 3 and 2, such that warrior 1 wins.

However, it's not possible for any other realm.