Problem F
Herding Cats
Time limit: 2 seconds

You are opening a cat cafe in Baku and would like to take a promotional photograph of all the cats sitting in the front window. Unfortunately, getting cats to do what you want is a famously hard problem. But you have a plan: you have bought a collection of m catnip plants, each of a different variety, knowing that each cat likes some of these varieties. There is a row of m pots in the window, numbered 1 to m in order, and you will place one plant in each pot. Each cat will then be persuaded (by means of a toy on a string) to walk along the row of pots from 1 to m. As soon as a cat reaches a pot with a catnip plant that it likes, it will stop there, even if there already are other cats at that plant.

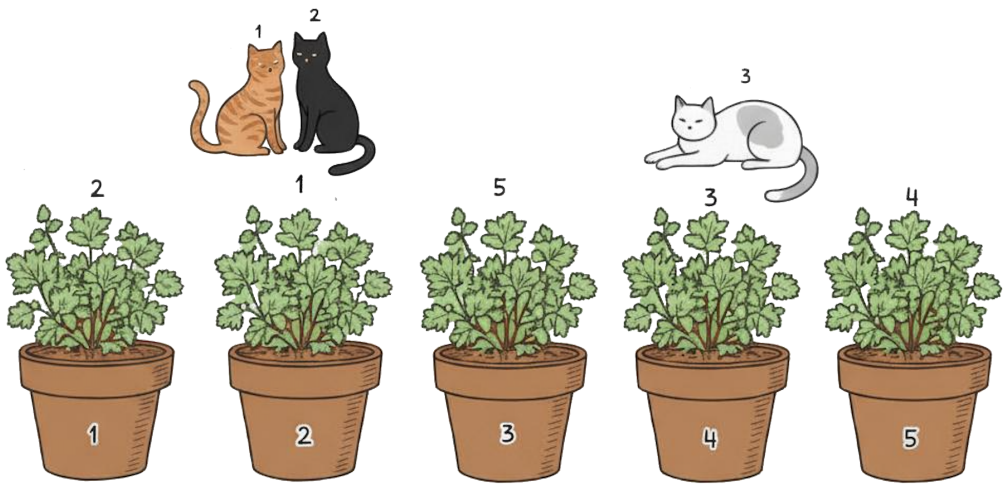

Figure F.1: One possible plant ordering for the first sample test case.

You know which pot you would like each cat to stop beside. Can you find a way in which to place the plants in the pots to achieve this?

Input

The first line of input contains an integer t ($1 \leq t \leq 10\,000$), which is the number of test cases. The descriptions of t test cases follow.

The first line of each test case contains two integers n and m, where n ($1 \leq n \leq 2 \cdot 10^5$) is the number of cats, and m ($1 \leq m \leq 2 \cdot 10^5$) is the number of catnip plants (and also the number of pots). Catnip plants are numbered from 1 to m.

The following n lines each describe one cat. The line starts with two integers p and k, where p ($1 \leq p \leq m$) is the pot at which the cat should stop, and k ($1 \leq k \leq m$) is the number of catnip plants the cat likes. The remainder of the line contains k distinct integers, which are the numbers of the plants that the cat likes.

Over all test cases, the sum of n is at most $2 \cdot 10^5$, the sum of m is at most $2 \cdot 10^5$, and the sum of all k is at most $5 \cdot 10^5$.

Output

For each test case, output either `yes` if it is possible to arrange the catnip plants as described above, or `no` if not.

Sample Input 1	Sample Output 1
2 3 5 2 2 1 5 2 3 1 4 5 4 2 3 4 3 5 2 2 1 5 2 3 1 4 5 5 2 3 4	yes no

Explanation of Sample 1: In the first test case, a possible ordering of the plants is $[2, 1, 5, 3, 4]$. This way, cat 1 will stop at pot 2, as it is the first pot with a plant variety that it likes. Cat 2 will stop there as well. Cat 3 will continue all the way to pot 4, as shown in Figure F.1.