Candy Combinations
Filename: morecombos

You have won a contest where you get to choose several bags of candy out of a larger set of bags. Luckily, you know the contents of each bag. Your goal is to maximize the number of different candies you receive.

The Problem
Given the contents of several bags of candies, and a limit to the number of those bags you can choose, determine the maximum number of unique candies you can receive.

The Input
The first line of the input file will contain a number, n $(1 \leq n \leq 100)$, representing the number of contests you have to evaluate. The first line of each contest will contain two positive integers, b $(1 \leq b \leq 20)$ and k $(1 \leq k \leq b)$, representing the number of bags from which to choose and the maximum number of bags that you are allowed to choose, respectively, for this contest. The next b lines will contain information about the contents of each bag, respectively. The first value on each of these lines will be an integer m $(1 \leq m \leq 50)$, representing the number of candies in the corresponding bag. The following m integers will represent the number of each of the candies in the bag. Each of these integers will be in between 1 and 31, inclusive.

The Output
For each case, output the maximum number of unique candies (which will never be more than 31) you can obtain by choosing the specified number of bags.

Sample Input
```
2
3 2
4 1 1 1 1
2 2 3
2 4 5
4 1
10 6 5 5 5 4 6 5 5 5 4
4 1 2 3 4
5 2 2 2 3 3
6 7 7 1 1 3 3
```

Sample Output
```
4
4
```