**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 ≤ n ≤ 100)*, representing the number of contests you have to evaluate. The first line of each contest will contain two positive integers, *b (1 ≤ b ≤ 20)* and *k (1 ≤ k ≤ 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 ≤ m ≤ 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