Lottery

OK, that’s enough coding. It's time to travel!

Imagine you have just won a lottery which contains a set of tickets. Each ticket will allow you to stay in some hotels within a city for one night, FREE! However, you can only use each ticket once.

Each test case denotes the information about one city. For each test case you will be given T tickets and H hotels. H hotels have distinct non-negative integer id from 1 to H. You want to stay in each hotel for one night only.

Your target is to visit all of the hotels. After using some or all of the tickets, there may be some hotels you have to pay for in order to stay there. For each test case you have to find the minimal number of hotels you have to pay for on your own.

Input Format

The first line of the input will be two space separated integers T and H. Each of the following T lines will contain the information of a ticket and which are the hotels you can use the ticket in. Each line will start with a number T_i denoting the number of hotels you can use this ticket in, followed by T_i number of space separated integers denoting the ids of the hotels you can use this ticket in.

Constraints

$1 <= T <= 10000$
$1 <= H <= 100000$
$1 <= T_i <= 20$

Output Format

Output will be an integer denoting the number of hotels where you have to pay on your own to stay there. You have to minimize this number.

Sample Input

```
3 4
3 1 2 3
1 1
1 2
```

Sample Output

```
1
```

Explanation

You can use lottery number 1, 2 and 3 in the hotel 3, 1 and 2 respectively. Hence you have to pay only for hotel 4.