Reunion

Description

It's been years since Kyaru and her best friends graduated from high school and they all miss each other very much. Recently, they've finally find a time when everyone is free. However, where to have a reunion becomes another problem to them. The reason is that they are currently living in different cities and plan to reunite in one city by plane, but there aren't many airlines in the whole country, which means there may be some unreachable cities for some of Kyaru's friends no matter how they fly.

More specifically, there're K friends (including Kyaru herself) living in N cities. In the whole country, there're M airlines, each of which is one-way and has one departure city and one destination city.

Of course an airline won't have its destination the same as its departure city. Also, a city is definitely reachable to whom lives there.

Now Kyaru would like you to help her find how many cities can be chose for reunion, i.e. reachable to all of them(You don't need to worry about how they go back after the reunion).

Input

The first line contains three space-separated integers, respectively: K, N, and M

The i-th line of the next K line contains a single integer $(1..N)$ representing the index number of the city where the i-th friend currently lives.

The i-th line of the next M line contains two space-separated integers a, b representing that there's an one-way airline from city a to city b.

Output

One integer indicating the number of cities that can be chose for reunion.

Sample Input/Output

Input

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

Output

```
2
```

Hint

They can reunite in city 3 or city 4

Constraint

$1 \le K \le 100, 1 \le N \le 1000, 1 \le M \le 10^4$.