

Asuka's Spying

Description

Asuka likes Kaji Ryouji, so she wants to spy on Kaji and stop him from chatting with other girls. Kaji uses SNS to chat with girls (in Japan, Wechat is not usually used). The friendship in SNS can be considered as a graph $G = \{V, E\}$, where V represents the user accounts (nodes) and E represents the friendships (edges). Girls can be considered as a subset of nodes $g \subseteq V$ with $|g| = k$. Through the relationship between friends in SNS, Kaji can send messages to girls with whom he has a direct/indirect relationship.

Asuka decides to do some damage to this SNS in order to not let other girls see Kaji's messages. Asuka can perform the following two actions:

1. Unfriend two people
2. Change someone's account password (Kaji's password cannot be changed)

If two people are unfriended, Kaji can't find other friends through their relationship.

If someone's password is changed, that person will not be able to see the message, but since the friends have not changed, Kaji can still look for other friends through that person's relationship.

Asuka wants to minimize the number of actions so that all girls can't see Kaji's messages. Please tell Asuka the minimum number of actions she needs to take.

Input Format

The first line includes three integers n, m, k , which are the account number, relationship number and the number of girls.

The second line includes k integers, which are the indices of girls.

The next m lines, each include two integers a_i, b_i , representing that there is a friendship between a_i and b_i .

Note that the account number is start from 0. Kaji's account number is 0, and it is guaranteed that there is no duplicated friendship.

Output Format

The output is one integer, which is the answer.

Sample

Sample Input

```
10 11 3
7 8 9
0 1
0 2
0 3
0 4
1 5
2 5
5 6
6 7
6 8
3 9
4 9
```

Sample Output

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2
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For 40% testcases: $0 \leq m \leq 12$.

For 100% testcases: $1 \leq n \leq 200, 0 \leq k \leq n, 0 \leq m \leq \frac{n(n-1)}{2}$.