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## Guidelines

## Coding Area

Editor | Compile &  
Run History

## Submissions

## Feedback Form

## Graphs

## Coding Area

A

B

C

D

E

F

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## Quarantine Logic

## + Problem Description

There are N number of folders, where N represents a natural number. All the N folders are inside a root folder named 0. Now, the computer in which the folders are present is attacked by a virus, which is spreading fast in the computer system. Anti-virus software detects the folders, which are virus-infected. It will have to quarantine the folders as quickly as possible to prevent the virus from spreading further.

Root folder cannot be quarantined.

As an anti-virus software developer, write a program to determine the minimum number of folders required to be quarantined, to contain the infection.

## + Constraints

 $1 \leq N, M \leq 10^5$ 

## + Input Format

First Line contains one integer N, which denotes the number of folders inside the root folder 0.

Second Line contains N space-separated integers with each index (starting from 1) denoting its parent folder (please refer *Example* section for more clarifications)

Third Line contains one integer M, which denotes the number of folders to be quarantined.

Fourth Line contains space-separated integers denoting folders that are to be quarantined.

## + Output

One Integer representing the minimum number of folders to be quarantined to contain the virus

## + Test Case

## + Explanation

## Example 1

## Input

8

0 0 1 1 2 3 6 2

4

6 7 5 8

## Output

2

## Explanation

If we quarantine folder 2 then folders 5 and 8 are automatically quarantined and If we quarantine folder 3 then folders 6 and 7 are automatically quarantined.

So minimum number of folders required to be quarantined is 2.

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