# Problem G
Parallel World

Time limit: **3 seconds**
Memory limit: **1024 megabytes**

Problem Description

In the movie "Everything Everywhere All at Once", there is a theory of parallel worlds: from the moment a person is born, they make a series of choices, and the choices not made in this life occur in another parallel world. These parallel worlds branch out like tree limbs, continuously creating new ones, with the differences between two worlds becoming greater the further apart they are. Therefore, we can use a tree structure to represent the resulting parallel worlds. And according to the properties of tree structure, we can calculate the distance between two worlds. For example, the distance between World 4 and World 5 is 3 ($4 \rightarrow 1 \rightarrow 2 \rightarrow 5$).
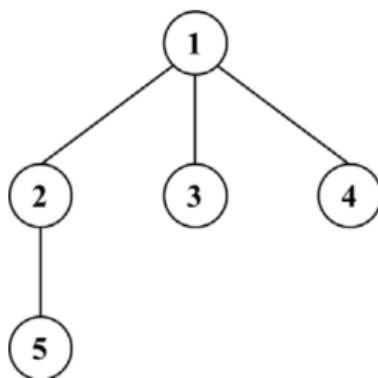
Input Format

Your program is to read from standard input. The first line of each test case is in interger number n, which indicates the number of parallel worlds. The second line contains two integer numbers w_1 and w_2, which indicate we would like to know the distance between parallel worlds w_1 and w_2. There is a space between these two integers. The next following n line, the first integer w represents the parallel world w, and the next integer numbers represent the parallel worlds which branch from parallel world w. There is a space between these integer numbers.

Output Format

Your program is to write to standard output. For each test case, output the distance between the parallel worlds w_1 and w_2.

Technical Specification

- $0 < n < 50$

- $1 \leq w, w_1, w_2 \leq n$

Sample Input 1

```
5
4 5
1 2 3 4
2 5
3
4
5
```

Sample Output 1

```
3
```

Sample Input 2

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

Sample Output 2

```
1
2
```