Problem D

Train Shuffle

Time limit: 1 second
Memory limit: 1024 megabytes

Problem Description

At an ancient railway station, a train is waiting to depart. This train consists of *N* carriages numbered from 1 to *N*. These carriages are lined up on the station's tracks, ready to depart for the next destination.

The station master is responsible for rearranging these carriages so that they leave the station in a new order. The station master uses a special method of arrangement: he places the carriages in the order of their original positions, but when he pushes the carriages onto the track, he can choose to place them at the front or the rear of the train. As a result, the new order of the carriages when the train departs may be different from the original order.

Now, your task is to help the station master verify whether the new order of the carriages after the train leaves the station conforms to his rearrangement method.

Given an integer *N*, representing the number of carriages in the train, followed by two sequences of length *N* each, representing the carriage numbers before and after arriving at the destination respectively. Determine if the sequence of carriage numbers after arriving at the destination matches the result of the station master's rearrangement.

If it matches, output "Success"; if not, output "Fail".

Input Format

There are several test cases. Each test case contains 3 lines. The first line contains an integer N, the number of carriages. The second line contains N integers, representing the carriage numbers before departure. The third line contains N integers, representing the carriage numbers after rearrangement.

Output Format

Output a single line containing the word "Success" if the carriage numbers after rearrangement match the station master's possible rearrangement method. Otherwise, output "Fail".

Technical Specification

- $1 \leq N \leq 10^7$

Sample Input 1

```
7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
7
1 2 3 4 5 6 7
5 1 7 4 2 3 6
```

Sample Output 1

```
Success
Fail
```