Security Bijective Functions

Now that we know about one-to-one functions, let's talk about *onto* functions and *bijective* functions.

A function $f : X \to Y$ is *onto* if and only if each element in the co-domain Y is the image of, at least, one element in the domain X. That is:

$$Im(f) = Y$$

If the function f is both *one-to-one* and *onto* then f is a *bijection* from X to Y or, equivalently, $f : X \to Y$ is a bijective function.

In this task, you'll be given an integer n and a function $f : X \to X$ where $X = \{1, 2, 3, \ldots, n\}$. Determine whether the given function is a bijective function or not.

Constraints

$$1 \leq n \leq 20$$

Input Format

There are 2 lines in the input.
The first line contains a single positive integer n.
The second line contains n space separated integers, the values of $f(1)$, $f(2)$, $f(3)$, $\ldots$, $f(n)$, respectively.

Output Format

On a single line, output "*YES*" if f is bijective. Otherwise, output "*NO*".

Sample Input

```
3
1 2 3
```

Sample Output

```
YES
```

Explanation

Basically, this is the function $f(x) = x$.