# Security Permutations

Consider a function $f : X \to X$ where $X$ is any set.

If $f$ is a bijection, then $f$ is a permutation function of $X$. There is nothing special about the set $X$. It can be replaced by the set $\{1, 2, 3, \ldots, n\}$ where $n = |X|$.

Consider a permutation $f$ given by $(2, 3, 1)$. This means that $f(1) = 2$, $f(2) = 3$ and $f(3) = 1$.

In this task, you're given a permutation $f : \{1, 2, 3, \ldots, n\} \to \{1, 2, 3, \ldots, n\}$.

Output $f(f(x))$ for all $x \in \{1, 2, 3, \ldots, n\}$.

## 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 separate lines, output the values of $f(f(1))$, $f(f(2))$, $f(f(3))$, $\ldots$, $f(f(n))$ , respectively.

## Sample Input

```
3
2 3 1
```

## Sample Output

```
3
1
2
```

## Explanation

$f(f(1)) = f(2) = 3$ and so on.