

Task «Another round»

You are given preorder and inorder traversals of some binary tree. Get it postorder bypass.

Input format

The first line of the input contains an integer n – the number of vertices in the tree ($1 \leq n \leq 100'000$).

The second line contains n different non-negative integers – preorder traversal of the tree.

The third line contains n different non-negative integers – inorder traversal of the tree.

It is guaranteed that these traversals are indeed correct preorder and inorder traversals of some binary tree.

Output format

In a single line print n numbers – postorder traversal of the given tree.

Sample input:

```
8
2 5 1 8 6 3 4 7
8 1 6 5 2 4 3 7
```

Sample output:

```
8 6 1 5 4 7 3 2
```