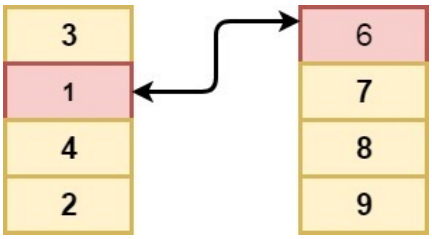
Twin Arrays

You are given two arrays A and B each containing n integers. You need to choose exactly one number from A and exactly one number from B such that the index of the two chosen numbers is not same and the sum of the 2 chosen values is minimum.

Your objective is to find and print this minimum value.

For example in the image shown below $1 + 6$ is the minimum sum.



Input Format

The first line contains an integer n denoting the size of two arrays.
Each of the next two lines contains n space separated integers denoting array A and B respectively.

Constraints

- $2 \leq n \leq 10^5$
- $1 \leq \text{array elements} \leq 10^5$

Output Format

Print the minimum sum which can be obtained under the conditions mentioned in the problem statement.

Sample Input 0

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

Sample Output 0

```
2
```

Explanation 0

Minimum sum will be obtained by chosing number at the last index of first array and first index of the second array, i.e. 2.