Problem D
Distance

Time Limit: 1 seconds
Memory Limit: 256 Megabytes

On a beautiful day, Duy decided to come to Huy's house to visit him. Huy lives in a village that includes ***n*** houses. All the houses in Huy's neighborhood form a circle. In order to come to one house from another house, you have to pass some adjacent houses to come to your destination.

For example: there are 6 houses. You are at house **2**th and want to come to house **5**th. You can only go to house 5th by two ways:

1. $2 \rightarrow 3 \rightarrow 4 \rightarrow 5$
2. $2 \rightarrow 1 \rightarrow 6 \rightarrow 5$

Duy is at house ***x*** and Huy's house is ***y***. Duy wants to visit his friend as soon as possible so he needs to go on the shortest path. Please help him calculate the distance of the shortest path he needs to go.

Input

The first line contains 3 integers ***n***, ***x*** and ***y*** ($2 \le n \le 10^5$; $1 \le x, y \le n$)denoting the number of houses, the house where Duy is at and the house where Huy is at.

The second line contains n integers $A_1, A_2, A_3, \ldots, A_n (1 \le i \le n;\ 1 \le A_i \le 1000)$. A_i is the distance of the road from house ***i*** to house ***i+1*** and $A_n$is the distance of the road from house ***n*** to house **1**.

Output

Print one line contains one number denoting the distance of the shortest path from ***x*** to ***y***.

Examples

Input
5 2 4 1 2 3 1 2
Output
4

Input
5 2 4 1 2 3 5 6
Output
5