

Subarray with the largest sum

Given an array of integers A. A subarray of array A is an array of zero or more consecutive elements in A. Given array A, find the largest possible absolute sum of a non-empty subarray of A.

Input

The first line is an integer n ($n \leq 10^6$)

The second line is the n integers of array A.

Output

The largest possible sum

Example

Input:

7
-1 2 4 -1 6 -10 1

Output:

11