Maximum Contiguous Sum of Subsequence

Time limit: 1 sec

Given a sequence $A=a_1,a_2,a_3,\ldots,a_n$, a subsequence of **A** is a non-empty set of consecutive members of **A**. A subsequence can be defined by two distinct indices of **A** that mark the beginning and ending members of the subsequence. For example, $\{a_3,a_4,a_5\}$ is a subsequence of A defined by indices 3 and 5.

We would like to find a subsequence of **A** such that the summation of the elements of that subsequence is maximal.

Input

- The first line of input contains one integers **N** $(1\le N\le 10^5)$ indicating the size of the array.
- The second line contains **N** integer A[i] $(-1\times10^6\le A[i]\le 10^6)$ that indicates the elements of the array.

Output

The only line of the output must contain the summation of the maximal subsequence

Example

Input	Output
15 1 2 -1 5 3 -8 -2 4 3 -4 -5 7 -1 -2 4	10
8 -1 -2 -2 -2 -2 -2 -2 -1	-1