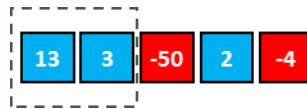


## Problem D: Alien Vaccine

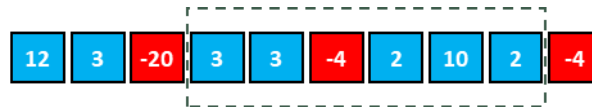
### Description

A hypothetical vaccine is made from messenger ribonucleic acid (RNA). The strength of this alien vaccine is measured from the localized nano-electric charges available around each base. The overall strength score is determined from the largest continuous positive charge that the vaccine can generate. Vaccine with no positive charges has a score of zero.

For instance, in Test 1, the largest accumulation of charge occurs between the first two bases—resulting in the score of 16.



Similarly, in Test 2, the score is 16 as accumulated between the highlighted six bases below.



### Input

The first line of the dataset contains the total number of bases in the alien vaccine ( $3 \leq N \leq 1,000,000$ ). Each of the following **N** lines contain the charge ( $-100 \leq Q \leq 100$ ) of each base in the vaccine mRNA.

### Output

Print out the overall strength score of the vaccine on its own line.

**NB:** *Kindly note that your solution will be run at least five times. Each time, it will be tested against a different set of input. The first few test cases are given below to help you check your solution. The remaining tests can be seen from the contest page for this problem or the results page after you submit your solution.*

### Test 1

| Input                          | Output |
|--------------------------------|--------|
| 5<br>13<br>3<br>-50<br>2<br>-4 | 16     |

### Test 2

| Input  | Output |
|--|--------|
| 10<br>12<br>3<br>-20<br>3<br>3<br>-4<br>2<br>10<br>2<br>-4 | 16     |

### Test 3

| Input                 | Output |
|-----------------------|--------|
| 3<br>-15<br>-2<br>-14 | 0      |