British Informatics Olympiad Final

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The Retired Computer

Buried deep inside a mountain an ex-defence computer is busy playing Othello against itself — an addiction that began after entering round one. After each game it gives itself a score (between -100 and 100), and like most games players it is interested in knowing what its best run has been. A run is one or more consecutive games, the 'value' for that run being the sum of the scores during the run. The best run is the one with the highest value.

For example, the sequence of scores `-5 8 7 -2 3 -4` has 21 different runs; 6 of 1 score, 5 of 2 scores, ..., 1 of 6 scores. The best run for this sequence of games is `8 7 -2 3`, with a value of 16.

Write a program that calculates the value of the best run. The first number input will be the number of games that have been played (between 1 and 1,000,000). This will be followed by a sequence of integers, one one each line, representing the scores (in order). You should output the value of the best run.

Sample Input

```
6
-5
8
7
-2
3
-4
```

Sample Output

```
16
```