

Exercising

Time Limit: 1 Second
Memory Limit: 256 MB

LetianPie found that his weight is getting higher and higher even though he has been walking 2 miles per day. Therefore, he decides to do outdoor jogging in the morning to lose weight. To consistently lose weight, LetianPie needs to jog at least once every two days. Annoyingly, Champaign-Urbana rains and snows a lot, and the temperature is extremely low on most winter days, which makes it very uncomfortable to run outside. For the next n days, LetianPie has assigned each of them with a value a_i representing how comfortable it is to do jogging based on weather and temperature, and he wants to know the maximum total comfort value he can obtain by choosing his exercising schedule optimally while losing weight consistently. The total comfort value he gains from exercising is the sum of comfort values assigned to the days he goes for jogging. More formally, the total comfort value is $\sum_{d \in D} a_d$, where D is the set of days LetianPie goes for jogging. Assume that LetianPie doesn't go jogging on day 0 and $n + 1$ (so he has to go jogging on day 1 and day n).

Input

The first line of input contains a single integer n ($1 \leq n \leq 2 \times 10^5$) - number of days.

The second line contains n integers a_1, \dots, a_n ($|a_i| \leq 10^5$) - the comfort value for each day.

Output

Output a single integer denoting the maximum total comfort value if LetianPie chooses the exercising schedule optimally while jogging at least once every two days.

Sample Inputs

5
-3 -2 1 -4 5

Sample Outputs

3

Note

LetianPie can go jogging on day 1, 3, and 5.