

Advertising Placement

Time limit: 1 sec

You are a marketing officer of a particular company planning to display ads on a long straight highway going from east to west. Along the highway, there are billboards available for ad display renting. Each billboard is numbered from 1 to N along the road. Each billboard reaches different number of customer. It depends on various factor such as size, position, etc. We let $c[i]$ be the number of customer seeing the billboard numbered i and the total number of customer seeing your ads is the sum of customer seeing each billboard you rent. Naturally, you want your ads to reach as much customer as possible and you aim to rent all billboards.

However, too much of good things is bad, customer seeing your ads again and again will get bored of your product. As a rule, you cannot rent two billboards that are adjacent to each other. The billboard numbered i is adjacent to billboard number $i+1$.

Given the number of customer seeing each billboard, determine the maximum total number of customers seeing your ads without breaking the above rule.

Input

- The first line of the input is the number of billboards N ($1 \leq N \leq 10,000$).
- The second line of the input contains N integers describing $c[i]$ starting from $c[1]$ to $c[n]$ ($1 \leq c[i] \leq 1,000$).

Output

The output must contain exactly one line giving the maximum total number of customers seeing your ads without breaking the above rule.

Example

Input	Output
3 3 4 2	5
10 48 1 3 95 2 1 3 44 22 2	190