Bigger Billboard

Time limit: 1 sec

*** THIS PROBLEM IS VERY SIMILAR TO "Billboard (Advertising Placement)" IN EXERCISE****

You are a marketing officer of a particular company planning to display ads on a long straight highway. Along the highway, there are billboards available for ads display renting. Each billboard is numbered from 1 to **N** along the road. Each billboard reaches different number of customers. It depends on various factor such as size, position, etc. We let **c**[i] be the number of customer seeing the billboard numbered i.

You want to rent as many billboards as possible such that the number of customer seeing your ads is maximum. The number of customer seeing your ads is the sum of **c**[i] of the billboards that you rent.

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 too close to each other. The billboard numbered *i* is considered to be too close to the billboard numbered *i-2*, *i-1*, *i+1* and *i+2*. For example, if you rent a billboard numbered 5, you MUST NOT rent any billboard numbered 3, 4, 6 nor 7.

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 <= **N** <= 10,000).
- The second line of the input contains **N** integers describing **c**[i] starting from **c**[1] to **c**[n] (1 <= c[i] <= 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**
5 1 1 1 1 1	2 // from choosing billboard #1 and #4
3 3 4 2	4 // choosing #2 only
10 48 1 3 95 2 1 3 44 22 2	187