Problem I. Number Sequence

Given a sequence of n integer numbers $a_1, a_2, \ldots, a_n$, a sub-sequence of the given sequence is $a_i, a_{i+1}, \ldots, a_j (1 \leq i \leq j \leq n)$ which has the length $(j - i + 1)$ and the sum $(a_i + a_{i+1} + \cdots + a_j)$. Your task is to find the sub-sequence which has the length divisible by 3 and has biggest sum.

Input

The first line is the length n ($3 \leq n \leq 300000$) of the given sequence.

The second line is the list of n numbers $a_1, a_2, \ldots, a_n$ ($|a_i| \leq 10^9$) of the given sequence.

Output

Output is the biggest sum of the sub-sequence.

Examples

Standard Input	Standard Output
11 1 1 1 -9 1 1 1 1 -1 1 -9	4

Note: The sub-sequence 1 1 1 1 -1 1 has the length of 6 (divisible by 3) and biggest sum is 4.