

B. The Fibonacci Segment

time limit per test: 1 second
memory limit per test: 256 megabytes

You have array a_1, a_2, \dots, a_n . Segment $[l, r]$ ($1 \leq l \leq r \leq n$) is good if $a_i = a_{i-1} + a_{i-2}$, for all i ($l+2 \leq i \leq r$).

Let's define $len([l, r]) = r - l + 1$, $len([l, r])$ is the length of the segment $[l, r]$. Segment $[l_1, r_1]$, is longer than segment $[l_2, r_2]$, if $len([l_1, r_1]) > len([l_2, r_2])$.

Your task is to find a good segment of the maximum length in array a . Note that a segment of length 1 or 2 is always good.

Input

The first line contains a single integer n ($1 \leq n \leq 10^5$) — the number of elements in the array. The second line contains integers: a_1, a_2, \dots, a_n ($0 \leq a_i \leq 10^9$).

Output

Print the length of the longest good segment in array a .

Examples

input	Copy
10 1 2 3 5 8 13 21 34 55 89	
output	Copy
10	

input	Copy
5 1 1 1 1 1	
output	Copy
2	

Codeforces Round 213 (Div. 2)

Finished

Practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
283830720	Oct/01/2024 01:48	Accepted
283830668	Oct/01/2024 01:46	Wrong answer on test 3

→ Problem tags

implementation *1100

No tag edit access

→ Contest materials

Codeforces Round #213

Tutorial