D. Fibonacci-ish

time limit per test: 3 seconds
memory limit per test: 512 megabytes
input: standard input
output: standard output

Yash has recently learnt about the Fibonacci sequence and is very excited about it. He calls a sequence Fibonacci-ish if

1. the sequence consists of at least two elements
2. f_0 and f_1 are arbitrary
3. $f_{n+2} = f_{n+1} + f_n$ for all $n \geq 0$.

You are given some sequence of integers $a_1, a_2, ..., a_n$. Your task is rearrange elements of this sequence in such a way that its longest possible prefix is Fibonacci-ish sequence.

Input

The first line of the input contains a single integer n $(2 \leq n \leq 1000)$ — the length of the sequence a_i.

The second line contains n integers $a_1, a_2, ..., a_n$ $(|a_i| \leq 10^9)$.

Output

Print the length of the longest possible Fibonacci-ish prefix of the given sequence after rearrangement.

Examples

input
3 1 2 -1
output
3

input
5 28 35 7 14 21
output
4

Note

In the first sample, if we rearrange elements of the sequence as $-1, 2, 1$, the whole sequence a_i would be Fibonacci-ish.

In the second sample, the optimal way to rearrange elements is , , , , 28.