

@LeetCode

A sequence x_1, x_2, \dots, x_n is *fibonacci-like* if:

- $n \geq 3$
- $x_i + x_{i+1} = x_{i+2}$ for all $i + 2 \leq n$

Given a **strictly increasing** array A of positive integers forming a sequence, find the **length** of the longest fibonacci-like subsequence of A . If one does not exist, return 0.

(Recall that a subsequence is derived from another sequence A by deleting any number of elements (including none) from A , without changing the order of the remaining elements. For example, $[3, 5, 8]$ is a subsequence of $[3, 4, 5, 6, 7, 8]$.)

Example 1:

Input: `[1,2,3,4,5,6,7,8]`

Output: 5

Explanation:

The longest subsequence that is fibonacci-like: `[1,2,3,5,8]`.

Example 2:

Input: `[1,3,7,11,12,14,18]`

Output: 3

Explanation:

The longest subsequence that is fibonacci-like:

`[1,11,12]`, `[3,11,14]` or `[7,11,18]`.

Note:

- $3 \leq A.length \leq 1000$
- $1 \leq A[0] < A[1] < \dots < A[A.length - 1] \leq 10^9$
- (The time limit has been reduced by 50% for submissions in Java, C, and C++.)