905. Length of Longest Fibonacci Subsequence

Difficulty : Medium

https://leetcode.com/problems/length-of-longest-fibonacci-subsequence

A sequence $x_1, x_2, ..., x_n$ is *Fibonacci-like* if:

- $n >= 3$
- $x_i + x_{i+1} == x_{i+2}$ for all $i + 2 <= n$

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

A **subsequence** is derived from another sequence `arr` by deleting any number of elements (including none) from `arr`, 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: arr = [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: arr = [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].
```

Constraints:

- `3 <= arr.length <= 1000`
- `1 <= arr[i] < arr[i + 1] <= 10^9`