167. Two Sum II - Input Array Is Sorted

Given a **1-indexed** array of integers numbers that is already ***sorted in non-decreasing order***, find two numbers such that they add up to a specific target number. Let these two numbers be numbers[$index_1$] and numbers[$index_2$] where 1 <= $index_1$ < $index_2$ <= numbers.length.

Return *the indices of the two numbers,* $index_1$ *and* $index_2$***, added by one*** *as an integer array* [$index_1$, $index_2$] *of length 2.*

The tests are generated such that there is **exactly one solution**. You **may not** use the same element twice.

Your solution must use only constant extra space.

Example 1:

Input: numbers = [2,7,11,15], target = 9

Output: [1,2]

Explanation: The sum of 2 and 7 is 9. Therefore, $index_1$ = 1, $index_2$ = 2. We return [1, 2].

Example 2:

Input: numbers = [2,3,4], target = 6

Output: [1,3]

Explanation: The sum of 2 and 4 is 6. Therefore $index_1$ = 1, $index_2$ = 3. We return [1, 3].

Example 3:

Input: numbers = [-1,0], target = -1

Output: [1,2]

Explanation: The sum of -1 and 0 is -1. Therefore $index_1$ = 1, $index_2$ = 2. We return [1, 2].

Constraints:

- 2 <= numbers.length <= $3 * 10^4$
- -1000 <= numbers[i] <= 1000
- numbers is sorted in **non-decreasing order**.
- -1000 <= target <= 1000

- The tests are generated such that there is **exactly one solution**.