

# 167 - Two Sum II - Input array is sorted

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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[index1]` and `numbers[index2]` where `1 <= index1 < index2 <= numbers.length`.

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, `index1 = 1`, `index2 = 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 `index1 = 1`, `index2 = 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 `index1 = 1`, `index2 = 2`. We return `[1, 2]`.

## Constraints:

- `2 <= numbers.length <= 3 * 104`
- `-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**.

