

167. Two Sum II - Input Array Is Sorted

Medium  6544  1007  Add to List  Share

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 $1 \leq \text{index}_1 < \text{index}_2 \leq \text{numbers.length}$.

Return the indices of the two numbers, `index1` and `index2`, **added by one** as an integer array `[index1, index2]` 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, `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:

- $2 \leq \text{numbers.length} \leq 3 \cdot 10^4$
- $-1000 \leq \text{numbers}[i] \leq 1000$
- `numbers` is sorted in **non-decreasing order**.
- $-1000 \leq \text{target} \leq 1000$
- The tests are generated such that there is **exactly one solution**.