1685. Sum of Absolute Differences in a Sorted Array

Solved ●

Medium Topics Companies Hint

You are given an integer array `nums` sorted in **non-decreasing** order.

Build and return *an integer array* `result` *with the same length as* `nums` *such that* `result[i]` *is equal to the* ***summation of absolute differences*** *between* `nums[i]` *and all the other elements in the array.*

In other words, `result[i]` is equal to `sum(|nums[i]-nums[j]|)` where `0 <= j < nums.length` and `j != i` (**0-indexed**).

Example 1:

> **Input:** nums = [2,3,5]
> **Output:** [4,3,5]
> **Explanation:** Assuming the arrays are 0-indexed, then
> result[0] = |2-2| + |2-3| + |2-5| = 0 + 1 + 3 = 4,
> result[1] = |3-2| + |3-3| + |3-5| = 1 + 0 + 2 = 3,
> result[2] = |5-2| + |5-3| + |5-5| = 3 + 2 + 0 = 5.

Example 2:

> **Input:** nums = [1,4,6,8,10]
> **Output:** [24,15,13,15,21]

Constraints:

- `2 <= nums.length <= 10^5`
- `1 <= nums[i] <= nums[i + 1] <= 10^4`

Seen this question in a real interview before? 1/4

Yes No

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Hint 1

Hint 2

Hint 3

Discussion (58)

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