

# Sum of Absolute Differences in a Sorted Array

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  $\sum(|\text{nums}[i] - \text{nums}[j]|)$  where  $0 \leq j < \text{nums.length}$  and  $j \neq i$  (**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:

- $2 \leq \text{nums.length} \leq 10^5$
- $1 \leq \text{nums}[i] \leq \text{nums}[i + 1] \leq 10^4$