

360. Sort Transformed Array

Description

Given a **sorted** integer array `nums` and three integers `a`, `b` and `c`, apply a quadratic function of the form $f(x) = ax^2 + bx + c$ to each element `nums[i]` in the array, and return *the array in a sorted order*.

Example 1:

Input: `nums = [-4,-2,2,4]`, `a = 1`, `b = 3`, `c = 5`
Output: `[3,9,15,33]`

Example 2:

Input: `nums = [-4,-2,2,4]`, `a = -1`, `b = 3`, `c = 5`
Output: `[-23,-5,1,7]`

Constraints:

- `1 <= nums.length <= 200`
- `-100 <= nums[i]`, `a`, `b`, `c <= 100`
- `nums` is sorted in **ascending** order.

Follow up: Could you solve it in `O(n)` time?

