An array is **monotonic** if it is either monotone increasing or monotone decreasing.

An array nums is monotone increasing if for all i <= j, nums[i] <= nums[j]. An array nums is monotone decreasing if for all i <= j, nums[i] >= nums[j].

Given an integer array nums, return true *if the given array is monotonic, or* false *otherwise*.

**Example 1:**

Input: nums = [1,2,2,3]  
Output: true

**Example 2:**

Input: nums = [6,5,4,4]  
Output: true

**Example 3:**

Input: nums = [1,3,2]  
Output: false

**Constraints:**

* 1 <= nums.length <= 105
* -105 <= nums[i] <= 105