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