

## 2210. Count Hills and Valleys in an Array

Solved ●

Easy

Topics



Hint

You are given a **0-indexed** integer array `nums`. An index `i` is part of a **hill** in `nums` if the closest non-equal neighbors of `i` are smaller than `nums[i]`. Similarly, an index `i` is part of a **valley** in `nums` if the closest non-equal neighbors of `i` are larger than `nums[i]`. Adjacent indices `i` and `j` are part of the **same** hill or valley if `nums[i] == nums[j]`.

Note that for an index to be part of a hill or valley, it must have a non-equal neighbor on **both** the left and right of the index.

Return the number of hills and valleys in `nums`.

### Example 1:

**Input:** `nums = [2,4,1,1,6,5]`

**Output:** 3

**Explanation:**

At index 0: There is no non-equal neighbor of 2 on the left, so index 0 is neither a hill nor a valley.

At index 1: The closest non-equal neighbors of 4 are 2 and 1. Since  $4 > 2$  and  $4 > 1$ , index 1 is a hill.

At index 2: The closest non-equal neighbors of 1 are 4 and 6. Since  $1 < 4$  and  $1 < 6$ , index 2 is a valley.

At index 3: The closest non-equal neighbors of 1 are 4 and 6. Since  $1 < 4$  and  $1 < 6$ , index 3 is a valley, but note that it is part of the same valley as index 2.

At index 4: The closest non-equal neighbors of 6 are 1 and 5. Since  $6 > 1$  and  $6 > 5$ , index 4 is a hill.

At index 5: There is no non-equal neighbor of 5 on the right, so index 5 is neither a hill nor a valley.

There are 3 hills and valleys so we return 3.

### Example 2:

**Input:** `nums = [6,6,5,5,4,1]`

**Output:** 0

**Explanation:**

At index 0: There is no non-equal neighbor of 6 on the left, so index 0 is neither a hill nor a valley.

At index 1: There is no non-equal neighbor of 6 on the left, so index 1 is neither a hill nor a valley.

At index 2: The closest non-equal neighbors of 5 are 6 and 4. Since  $5 < 6$  and  $5 > 4$ , index 2 is neither a hill nor a valley.

At index 3: The closest non-equal neighbors of 5 are 6 and 4. Since  $5 < 6$  and  $5 > 4$ , index 3 is neither a hill nor a valley.

At index 4: The closest non-equal neighbors of 4 are 5 and 1. Since  $4 < 5$  and  $4 > 1$ , index 4 is neither a hill nor a valley.

At index 5: There is no non-equal neighbor of 1 on the right, so index 5 is neither a hill nor a valley.

There are 0 hills and valleys so we return 0.

### Constraints:

- $3 \leq \text{nums.length} \leq 100$
- $1 \leq \text{nums}[i] \leq 100$

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Yes No

Accepted 163.711/235.7K | Acceptance Rate 69.5%

Topics





Hint 1



Hint 2



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