We have some permutation A of [0, 1, ..., N - 1], where N is the length of A.

The number of (global) inversions is the number of i < j with 0 <= i < j < N and A[i] > A[j].

The number of local inversions is the number of i with 0 <= i < N and A[i] > A[i+1].

Return true if and only if the number of global inversions is equal to the number of local inversions.

**Example 1:**

**Input:** A = [1,0,2]

**Output:** true

**Explanation:** There is 1 global inversion, and 1 local inversion.

**Example 2:**

**Input:** A = [1,2,0]

**Output:** false

**Explanation:** There are 2 global inversions, and 1 local inversion.

**Note:**

* A will be a permutation of [0, 1, ..., A.length - 1].
* A will have length in range [1, 5000].
* The time limit for this problem has been reduced.