

2179. Count Good Triplets in an Array

Description

You are given two **0-indexed** arrays `nums1` and `nums2` of length `n`, both of which are **permutations** of `[0, 1, ..., n - 1]`.

A **good triplet** is a set of **3** **distinct** values which are present in **increasing order** by position both in `nums1` and `nums2`. In other words, if we consider `pos1v` as the index of the value `v` in `nums1` and `pos2v` as the index of the value `v` in `nums2`, then a good triplet will be a set `(x, y, z)` where `0 ≤ x, y, z ≤ n - 1`, such that `pos1x < pos1y < pos1z` and `pos2x < pos2y < pos2z`.

Return *the total number of good triplets*.

Example 1:

Input: `nums1 = [2,0,1,3]`, `nums2 = [0,1,2,3]`

Output: 1

Explanation:

There are 4 triplets `(x,y,z)` such that `pos1x < pos1y < pos1z`. They are `(2,0,1)`, `(2,0,3)`, `(2,1,3)`, and `(0,1,3)`.

Out of those triplets, only the triplet `(0,1,3)` satisfies `pos2x < pos2y < pos2z`. Hence, there is only 1 good triplet.

Example 2:

Input: `nums1 = [4,0,1,3,2]`, `nums2 = [4,1,0,2,3]`

Output: 4

Explanation: The 4 good triplets are `(4,0,3)`, `(4,0,2)`, `(4,1,3)`, and `(4,1,2)`.

Constraints:

- `n == nums1.length == nums2.length`
- `3 ≤ n ≤ 105`
- `0 ≤ nums1[i], nums2[i] ≤ n - 1`
- `nums1` and `nums2` are permutations of `[0, 1, ..., n - 1]`.

