3231. Minimum Number of Increasing Subsequence to Be Removed Premium

Hard Topics Hint

Given an array of integers `nums`, you are allowed to perform the following operation any number of times:

- Remove a **strictly increasing** subsequence from the array.

Your task is to find the **minimum** number of operations required to make the array **empty**.

Example 1:

> **Input:** `nums = [5,3,1,4,2]`
>
> **Output:** 3
>
> **Explanation:**
>
> We remove subsequences `[1, 2]`, `[3, 4]`, `[5]`.

Example 2:

> **Input:** `nums = [1,2,3,4,5]`
>
> **Output:** 1

Example 3:

> **Input:** `nums = [5,4,3,2,1]`
>
> **Output:** 5

Constraints:

- `1 <= nums.length <= 10^5`
- `1 <= nums[i] <= 10^5`

Seen this question in a real interview before? 1/5

Yes No

Accepted 335 | Submissions 609 | Acceptance Rate 55.0%

Topics

Array Binary Search

Hint 1

Find the longest non-increasing subsequence.

Hint 2

No two elements of this sequence can be removed in one operation.

Hint 3

Try to prove that the answer is equal to the length of this sequence.

Discussion (0)