

2542. Maximum Subsequence Score

Medium  Topics  Companies  Hint

You are given two **0-indexed** integer arrays `nums1` and `nums2` of equal length `n` and a positive integer `k`. You must choose a **subsequence**

For chosen indices $i_0, i_1, ..., i_{k-1}$, your **score** is defined as:

- The sum of the selected elements from `nums1` multiplied with the **minimum** of the selected elements from `nums2`.
- It can defined simply as: $(\text{nums1}[i_0] + \text{nums1}[i_1] + ... + \text{nums1}[i_{k-1}]) * \min(\text{nums2}[i_0], \text{nums2}[i_1], ..., \text{nums2}[i_{k-1}])$.

Return *the **maximum** possible score*.

A **subsequence** of indices of an array is a set that can be derived from the set $\{0, 1, ..., n-1\}$ by deleting some or no elements.

Example 1:

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

Output: `12`

Explanation:

The four possible subsequence scores are:

- We choose the indices `0`, `1`, and `2` with score = $(1+3+3) * \min(2,1,3) = 7$.
- We choose the indices `0`, `1`, and `3` with score = $(1+3+2) * \min(2,1,4) = 6$.
- We choose the indices `0`, `2`, and `3` with score = $(1+3+2) * \min(2,3,4) = 12$.
- We choose the indices `1`, `2`, and `3` with score = $(3+3+2) * \min(1,3,4) = 8$.

Therefore, we return the max score, which is `12`.

Example 2:

Input: `nums1 = [4,2,3,1,1]`, `nums2 = [7,5,10,9,6]`, `k = 1`

Output: `30`

Explanation:

Choosing index `2` is optimal: $\text{nums1}[2] * \text{nums2}[2] = 3 * 10 = 30$ is the maximum possible score.

Constraints:

- `n == nums1.length == nums2.length`
- `1 <= n <= 105`
- `0 <= nums1[i], nums2[j] <= 105`
- `1 <= k <= n`

Seen this question in a real interview before? 1/4

Yes No

Accepted 74.5K Submissions 138K Acceptance Rate 54.0%

 Topics

 Companies

 Hint 1

 Hint 2

 Hint 3

 Similar Questions