

689. Maximum Sum of 3 Non-Overlapping Subarrays

Difficulty : Hard

<https://leetcode.com/problems/maximum-sum-of-3-non-overlapping-subarrays>

Given an integer array `nums` and an integer `k`, find three non-overlapping subarrays of length `k` with maximum sum and return them.

Return the result as a list of indices representing the starting position of each interval (**0-indexed**). If there are multiple answers, return the lexicographically smallest one.

Example 1:

Input: `nums = [1,2,1,2,6,7,5,1], k = 2`

Output: `[0,3,5]`

Explanation: Subarrays `[1, 2]`, `[2, 6]`, `[7, 5]` correspond to the starting indices `[0, 3, 5]`.

We could have also taken `[2, 1]`, but an answer of `[1, 3, 5]` would be lexicographically larger.

Example 2:

Input: `nums = [1,2,1,2,1,2,1,2,1], k = 2`

Output: `[0,2,4]`

Constraints:

- $1 \leq \text{nums.length} \leq 2 \cdot 10^4$
- $1 \leq \text{nums}[i] < 2^{16}$
- $1 \leq k \leq \text{floor}(\text{nums.length} / 3)$