

1121. Partition Array for Maximum Sum

Difficulty : Medium

<https://leetcode.com/problems/partition-array-for-maximum-sum>

Given an integer array `arr`, partition the array into (contiguous) subarrays of length **at most** `k`. After partitioning, each subarray has their values changed to become the maximum value of that subarray.

Return *the largest sum of the given array after partitioning. Test cases are generated so that the answer fits in a **32-bit** integer.*

Example 1:

Input: `arr = [1,15,7,9,2,5,10], k = 3`

Output: 84

Explanation: `arr` becomes `[15,15,15,9,10,10,10]`

Example 2:

Input: `arr = [1,4,1,5,7,3,6,1,9,9,3], k = 4`

Output: 83

Example 3:

Input: `arr = [1], k = 1`

Output: 1

Constraints:

- `1 <= arr.length <= 500`
- `0 <= arr[i] <= 109`
- `1 <= k <= arr.length`