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] <= 10^9
- 1 <= k <= arr.length