

1043. Partition Array for Maximum Sum

Description

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:

- $1 \leq \text{arr.length} \leq 500$
- $0 \leq \text{arr}[i] \leq 10^9$
- $1 \leq k \leq \text{arr.length}$

