

1723. Find Minimum Time to Finish All Jobs

Description

You are given an integer array `jobs`, where `jobs[i]` is the amount of time it takes to complete the i^{th} job.

There are `k` workers that you can assign jobs to. Each job should be assigned to **exactly** one worker. The **working time** of a worker is the sum of the time it takes to complete all jobs assigned to them. Your goal is to devise an optimal assignment such that the **maximum working time** of any worker is **minimized**.

*Return the **minimum possible maximum working time** of any assignment.*

Example 1:

Input: `jobs = [3,2,3]`, `k = 3`

Output: 3

Explanation: By assigning each person one job, the maximum time is 3.

Example 2:

Input: `jobs = [1,2,4,7,8]`, `k = 2`

Output: 11

Explanation: Assign the jobs the following way:

Worker 1: 1, 2, 8 (working time = $1 + 2 + 8 = 11$)

Worker 2: 4, 7 (working time = $4 + 7 = 11$)

The maximum working time is 11.

Constraints:

- $1 \leq k \leq \text{jobs.length} \leq 12$
- $1 \leq \text{jobs}[i] \leq 10^7$

