

2114. Minimum Number of Work Sessions to Finish the Tasks

Difficulty : Medium

<https://leetcode.com/problems/minimum-number-of-work-sessions-to-finish-the-tasks>

There are n tasks assigned to you. The task times are represented as an integer array `tasks` of length n , where the i^{th} task takes `tasks[i]` hours to finish. A **work session** is when you work for **at most** `sessionTime` consecutive hours and then take a break.

You should finish the given tasks in a way that satisfies the following conditions:

- If you start a task in a work session, you must complete it in the **same** work session.
- You can start a new task **immediately** after finishing the previous one.
- You may complete the tasks in **any order**.

Given `tasks` and `sessionTime`, return *the **minimum** number of **work sessions** needed to finish all the tasks following the conditions above*.

The tests are generated such that `sessionTime` is **greater** than or **equal** to the **maximum** element in `tasks[i]`.

Example 1:

Input: `tasks = [1,2,3]`, `sessionTime = 3`

Output: 2

Explanation: You can finish the tasks in two work sessions.

- First work session: finish the first and the second tasks in $1 + 2 = 3$ hours.
- Second work session: finish the third task in 3 hours.

Example 2:

Input: `tasks = [3,1,3,1,1]`, `sessionTime = 8`

Output: 2

Explanation: You can finish the tasks in two work sessions.

- First work session: finish all the tasks except the last one in $3 + 1 + 3 + 1 = 8$ hours.
- Second work session: finish the last task in 1 hour.

Example 3:

Input: `tasks = [1,2,3,4,5]`, `sessionTime = 15`

Output: 1

Explanation: You can finish all the tasks in one work session.

Constraints:

- $n == \text{tasks.length}$
- $1 \leq n \leq 14$
- $1 \leq \text{tasks}[i] \leq 10$
- $\max(\text{tasks}[i]) \leq \text{sessionTime} \leq 15$