

2071. Maximum Number of Tasks You Can Assign

Description

You have `n` tasks and `m` workers. Each task has a strength requirement stored in a **0-indexed** integer array `tasks`, with the `ith` task requiring `tasks[i]` strength to complete. The strength of each worker is stored in a **0-indexed** integer array `workers`, with the `jth` worker having `workers[j]` strength. Each worker can only be assigned to a **single** task and must have a strength **greater than or equal** to the task's strength requirement (i.e., `workers[j] >= tasks[i]`).

Additionally, you have `pills` magical pills that will **increase a worker's strength** by `strength`. You can decide which workers receive the magical pills, however, you may only give each worker **at most one** magical pill.

Given the **0-indexed** integer arrays `tasks` and `workers` and the integers `pills` and `strength`, return *the maximum number of tasks that can be completed*.

Example 1:

```
Input: tasks = [ 3 , 2 , 1 ], workers = [ 0 , 3 , 3 ], pills = 1, strength = 1
Output: 3
Explanation:
We can assign the magical pill and tasks as follows:
- Give the magical pill to worker 0.
- Assign worker 0 to task 2 (0 + 1 >= 1)
- Assign worker 1 to task 1 (3 >= 2)
- Assign worker 2 to task 0 (3 >= 3)
```

Example 2:

```
Input: tasks = [ 5 ,4], workers = [ 0 ,0,0], pills = 1, strength = 5
Output: 1
Explanation:
We can assign the magical pill and tasks as follows:
- Give the magical pill to worker 0.
- Assign worker 0 to task 0 (0 + 5 >= 5)
```

Example 3:

```
Input: tasks = [ 10 , 15 ,30], workers = [ 0 , 10 ,10,10,10], pills = 3, strength = 10
Output: 2
Explanation:
We can assign the magical pills and tasks as follows:
- Give the magical pill to worker 0 and worker 1.
- Assign worker 0 to task 0 (0 + 10 >= 10)
- Assign worker 1 to task 1 (10 + 10 >= 15)
The last pill is not given because it will not make any worker strong enough for the last task.
```

Constraints:

- `n == tasks.length`
- `m == workers.length`
- `1 <= n, m <= 5 * 104`
- `0 <= pills <= m`
- `0 <= tasks[i], workers[j], strength <= 109`

