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1891. Cutting Ribbons Premium

Medium Topics Companies Hint

You are given an integer array `ribbons`, where `ribbons[i]` represents the length of the `i^th` ribbon, and an integer `k`. You may cut a number of segments of **positive integer** lengths, or perform no cuts at all.

- For example, if you have a ribbon of length `4`, you can:
  - Keep the ribbon of length `4`,
  - Cut it into one ribbon of length `3` and one ribbon of length `1`,
  - Cut it into two ribbons of length `2`,
  - Cut it into one ribbon of length `2` and two ribbons of length `1`, or
  - Cut it into four ribbons of length `1`.

Your task is to determine the **maximum** length of ribbon, `x`, that allows you to cut *at least* `k` ribbons, each of length `x`. You can disc the cuts. If it is **impossible** to cut `k` ribbons of the same length, return 0.

Example 1:

```
Input: ribbons = [9,7,5], k = 3
Output: 5
Explanation:
- Cut the first ribbon to two ribbons, one of length 5 and one of length 4.
- Cut the second ribbon to two ribbons, one of length 5 and one of length 2.
- Keep the third ribbon as it is.
Now you have 3 ribbons of length 5.
```

Example 2:

```
Input: ribbons = [7,5,9], k = 4
Output: 4
Explanation:
- Cut the first ribbon to two ribbons, one of length 4 and one of length 3.
- Cut the second ribbon to two ribbons, one of length 4 and one of length 1
```