5920. Minimized Maximum of Products Distributed to Any Store

My Submissions (/contest/weekly-contest-266/problems/minimized-maximum-of-products-distributed-to-any-store/submissions/)
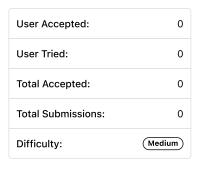
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You are given an integer `n` indicating there are `n` specialty retail stores. There are `m` product types of varying amounts, which are given as a **0-indexed** integer array `quantities`, where `quantities[i]` represents the number of products of the ith product type.

You need to distribute **all products** to the retail stores following these rules:

- A store can only be given **at most one product type** but can be given **any** amount of it.
- After distribution, each store will be given some number of products (possibly `0`). Let `x` represent the maximum number of products given to any store. You want `x` to be as small as possible, i.e., you want to **minimize** the **maximum** number of products that are given to any store.

Return *the minimum possible* `x`.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

```
Input: n = 6, quantities = [11,6]
Output: 3
Explanation: One optimal way is:
- The 11 products of type 0 are distributed to the first four stores in these amounts: 2, 3, 3, 3
- The 6 products of type 1 are distributed to the other two stores in these amounts: 3, 3
The maximum number of products given to any store is max(2, 3, 3, 3, 3, 3) = 3.
```

Example 2:

```
Input: n = 7, quantities = [15,10,10]
Output: 5
Explanation: One optimal way is:
- The 15 products of type 0 are distributed to the first three stores in these amounts: 5, 5, 5
- The 10 products of type 1 are distributed to the next two stores in these amounts: 5, 5
- The 10 products of type 2 are distributed to the last two stores in these amounts: 5, 5
The maximum number of products given to any store is max(5, 5, 5, 5, 5, 5, 5) = 5.
```

Example 3:

```
Input: n = 1, quantities = [100000]
Output: 100000
Explanation: The only optimal way is:
- The 100000 products of type 0 are distributed to the only store.
The maximum number of products given to any store is max(100000) = 100000.
```

Constraints:

- `m == quantities.length`
- $1 <= m <= n <= 10^5$
- $1 <= quantities[i] <= 10^5$

JavaScript ▾

```
1 ⊽ /**
2    * @param {number} n
3    * @param {number[]} quantities
4    * @return {number}
5    */
6 ⊽ var minimizedMaximum = function(n, quantities) {
```