Minimized Maximum of Products Distributed to Any Store

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 i^{th} 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 have been 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.

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