Increase or Smash

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Geumjae has an array a consisting of n zeros. His goal is to transform it into a given target array using a minimum number of operations.

He can perform the following two types of operations any number of times, in any order:

1. **Increase**: Choose any positive integer x. Increase *all* elements of the array a by x. In other words, he chooses a positive integer x, and for each i ($1 \le i \le n$), he replaces a_i with $a_i + x$.
2. **Smash**: Set *some* elements (possibly none or all) of the array a to 0. In other words, for each i ($1 \le i \le n$), he either replaces a_i with 0 or leaves it as before.

Given the final target state of the array a, find the minimum total number of operations (both **Increase** and **Smash**) Geumjae needs to perform.

It can be shown that for any given final array, a sequence of operations always exists.

Input

Each test contains multiple test cases. The first line contains the number of test cases t ($1 \le t \le 1000$). The description of the test cases follows.

The first line contains a single integer n ($1 \le n \le 100$) — the number of elements in the array a.

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($1 \le a_i \le 100$) — the elements of the target array a.

Output

For each test case, output a single integer — the minimum number of operations required.

Example

standard input	standard output
3 3 1 1 3 1 100 9 9 9 3 2 4 4 8 5 3	3 1 11

Note

Explanation of the first test case:

The target array is $[1, 1, 3]$. A possible sequence of 3 operations (which is the minimum) is:

1. Initially, the array is $[0, 0, 0]$. After an **Increase** operation with $x = 2$, the array becomes $[2, 2, 2]$.
2. Next, after a **Smash** operation on the first two elements, the array becomes $[0, 0, 2]$.
3. Finally, after an **Increase** operation with $x = 1$, the array becomes $[1, 1, 3]$.

We used 2 **Increase** operations and 1 **Smash** operation for a total of 3 operations.

Explanation of the second test case:

The target array is $[100]$. A single **Increase** operation with $x = 100$ gives the target array.