Range Equals Size

Input file:	`standard input`
Output file:	`standard output`
Time limit:	0.25 seconds
Memory limit:	4 megabytes

A multiset of integers is considered good if the difference between its maximum and minimum elements equals its size. For example, the multiset $\{1, 3\}$ is good, whereas $\{1, 2\}$ and $\{1, 1, 3\}$ are not.

Given an array of integers, determine the length of the longest subsequence that forms a good multiset.

Input

The first line of the input contains a single integer, t $(1 \leq t \leq 10^4)$ — the number of test cases.

The first line of each test case contains a single integer, n $(1 \leq n \leq 2 \cdot 10^5)$ — the length of the array.

The second line of each test case contains n integers, $a_1, a_2, \ldots, a_n$ $(1 \leq a_i \leq 10^9)$ — the elements of the array.

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, output a single integer — the length of the longest subsequence that forms a good multiset, or 0 if there is none.

Example

standard input	standard output
4	0
2	4
1 2	5
4	4
1 2 2 5	
6	
3 10 5 9 5 9	
6	
8 1 4 5 1 8	

Note

In the first test case, there is no good multiset.

In the second test case, the largest good multiset is the entire array.

In the third test case, $\{5, 5, 9, 9, 10\}$ is the largest good multiset, although $\{5, 5, 9, 9\}$ is also valid.

In the fourth test case, there are two good multisets of maximum size: $\{1, 1, 4, 5\}$ and $\{4, 5, 8, 8\}$.