h-index

description

According to the definition of h-index on Wikipedia:
"A scientist has index h if h of his/her N papers have at least h citations each, and the other N − h papers have no more than h citations each."

For example, If the researcher has 5 papers in total and each of them had received 3, 0, 6, 1, 5 citations respectively. Since the researcher has 3 papers with at least 3 citations each and the remaining two with no more than 3 citations each, his h-index is 3.
Note: If there are several possible values for h, the maximum one is taken as the h-index.

input

The input file will contain one or more test cases.
Each test case consists of one line containing several integers seperated from each other by spaces.
The first integer on the line will be the number N (1 <= N <= 1000000). Then N integers, specifying citations of each paper.
Input will be terminated by a value of zero for N

output

For each test case, output h-index on single line.

sample input

5 3 0 6 1 5
10 15 5 11 7 3 0 9 1 6 4
0

sample output

3
5