Problem H
H-Index

Problem ID: hindex
CPU Time limit: 1 second
Memory limit: 1024 MB

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Source: Rocky Mountain Regi Programming Contest 2018

In research, it is tough to determine how good of a researcher you are. One way that people determine how good you are is by looking at your H*-Index*.

Each paper has a certain number of citations. Your H-Index is the largest number H such that you have H papers with at least H citations. Given the number of citations on each paper you have written, what is your H-Index?

Input

The first line of input contains a single integer n ($1 \leq n \leq 100\,000$), which is the number of papers you have written.

The next n lines describe the papers. Each of these lines contains a single integer c ($0 \leq c \leq 1\,000\,000\,000$), which is the number of citations that this paper has.

Output

Display your H-Index.

Sample Input 1

```
5
7
1
2
1
5
```

Sample Output 1

```
2
```

Sample Input 2

```
5
7
1
3
1
5
```

Sample Output 2

```
3
```

Sample Input 3

```
3
4
2
3
```

Sample Output 3

```
2
```