

Student Proxy

A Proxy in context of class attendance refers to the act when a student who is present in a class makes attendance for a student who is absent in the same class.

There are N students in a class.

All the students have different expertise in giving proxies.

Precisely, we associate an integer P with every student which denotes the number of proxies he can make.

All students are capable of making proxies for any other student.

Input

First line contains an integer N ($1 \leq N \leq 1000000$) denoting the total number of students.

Then, N lines follow each containing an integer A_i ($1 \leq A_i \leq 100$). The integer A_i on the i th line denotes the number of proxies that the i th student can make.

Output

Print the minimum number of students that can be present in the class such that by giving proxies the recorded attendance can be 100%.

Example

Input:

5

1

3

2

1

2

Output:

2

Explanation, one possible solution is that the first and second student are present. Now first student can give 1 proxy and second can give 2 proxies making the recorded attendance 5.