

Turbo Sort

Given the list of numbers, you are to sort them in non decreasing order.

Input

t – the number of numbers in list, then t lines follow [$t \leq 10^6$].

Each line contains one integer: N [$0 \leq N \leq 10^6$]

Output

Output given numbers in non decreasing order.

Example

Input:

```
5
5
3
6
7
1
```

Output:

```
1
3
5
6
7
```