

Basic Sorting

Given a sequence of n integers a_1, a_2, \dots, a_n . Sort it in ascending order.

Input

Line 1: contains the integer n ($1 \leq n \leq 10^3$).

Line 2 to $n + 1$: $(i + 1)$ -th line contains the integer a_i ($|a_i| \leq 10^9$)

Output

Line 1 to n : each line contains each item of the sequence in ascending order.

Example

Input:

```
3
1
3
2
```

Output:

```
1
2
3
```