

# Sorting numbers

(Time Limit: 1 second)

## Problem Description

Please sort a given sequence of positive integers in the ascending order. You should implement the randomized quicksort by yourself. For example, do not use the qsort function in the standard C library.

## Input Format

The first line is the number  $n$  of the remaining lines. Each of the next  $n$  lines contains exactly one positive integer.

## Output Format

Please output in the ascending order all the positive integers from the second to the last lines of the input. Each positive integer should be in a separate line.

## Technical Specification

- $1 \leq n \leq 100000$ .
- The positive integers to be sorted are less than or equal to 100000.

## Example

Sample Input:	Sample Output:
5	4
4	4
6	6
20	7
7	20
4	