Miracle Sort

Time limit: 5.0s   **Memory limit:** 6M
PyPy 2: 10M
PyPy 3: 12M
Python 2: 10M
Python 3: 12M

How to sort.

Input Specification

On the first line, an integer N $(1 \leq N \leq 1\,000\,000)$. On the following N lines, there will be a sequence of N numbers, with each number between -2^{63} and $2^{63} - 1$.

Output Specification

Using a line break as a separator between numbers, print out the sequence from the input, in sorted order.