Problem description

You're given a list of floating-point numbers representing various measurements. Your task is to find the median of these numbers. The median is the middle value in a list when the numbers are sorted in ascending order. If the list has an even number of elements, the median is the average of the two middle numbers.

Input

The first line of input contains an integer N, representing the number of elements in the array. The second line contains N space-separated floating-point numbers, representing the elements of the array.

Output

Print a single floating-point number, the median of the array.

Constraints

- $1 \le N \le 10^5$
- $0 \le each\ element\ of\ the\ array \le 10^9$

Sample input/output

Sample input and output for this problem:

Input	Output
5 1.2 3.5 4.8 2.1 5.0	3.5
4 1.0 2.0 3.0 4.0	2.5