Meow Array

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Meow-meow is given an array, a, of N integers. Meow-meow would like to know the second smallest element, median, and the second-largest element of the array. Can you help Meow-meow?

Input

The first line of input contains one integer, N ($2 \leq N \leq 10^5$), the number of integers in the array. The second line contains n space-separated integers $a_1, a_2, a_3, ..., a_N$ ($-10^9 \leq a_i \leq 10^9$) — the array elements.

Output

Output a line contains 3 space-separated numbers: the second smallest element, the median, and the second-largest element of the array.

Examples

standard input	standard output
5 -2 5 -71 8 3	-2 3 5
6 -11 7 8 2 4 3	2 3.5 7
2 924896436 917026401	924896436 920961418.5 917026401

Note

Sample Input 1:

a_1 is the second smallest element, a_5 is the median, a_2 is the second-largest element.

Sample Input 2:

a_4 is the smallest element, the average of a_5 and a_6 is the median and a_2 is the second-largest element.