B. Optimal Point on a Line

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

You are given n points on a line with their coordinates x_i. Find the point x so the sum of distances to the given points is minimal.

Input

The first line contains integer n ($1 \leq n \leq 3 \cdot 10^5$) — the number of points on the line.

The second line contains n integers x_i ($-10^9 \leq x_i \leq 10^9$) — the coordinates of the given n points.

Output

Print the only integer x — the position of the optimal point on the line. If there are several optimal points print the position of the leftmost one. It is guaranteed that the answer is always the integer.

Example

input

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4
1 2 3 4
```

output

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2
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