Problem C. Optimal Point on a Line

Time limit 1000 ms
Mem limit 262144 kB

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 ($1 \le n \le 3 \cdot 10^5$) — the number of points on the line.

The second line contains n integers x_i ($-10^9 \le x_i \le 10^9$) — 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.

Sample 1

Input	Output
4 1 2 3 4	2