Median

You are given an array a of length n (n is **odd**) consisting of 0's and 1's. Find the median of the array. The median of an odd-sized array is the **middle element** of the array after the array is sorted in non-decreasing order.

Input

Read the input from the standard input in the following format:

- line 1: n
- line 2: $a[1]$ $a[2]$ $\ldots$ $a[n]$

Output

Write the output to the standard output in the following format:

- line 1: The median of the array

Constraints

- $1 \leq n \leq 10^5$, n is odd.
- $0 \leq a[i] \leq 1$ (for all $1 \leq i \leq n$)

Subtasks

1. (19 points) $n = 1$.
2. (18 points) $n = 3$.
3. (23 points) $a[i] = 0$ (for $1 \leq i \leq n$).
4. (40 points) No additional constraints.

Examples

Example 1

```
5
0 1 1 0 0
```

The correct output is:

```
0
```

Example 2

```
3
1 1 1
```

The correct output is:

```
1
```

Example 3

```
7
0 0 1 0 1 1 0
```

The correct output is:

```
0
```