Find the Median

Problem Statement

In the Quicksort challenges, you sorted an entire array. Sometimes, you just need specific information about a list of numbers, and doing a full sort would be unnecessary. Can you figure out a way to use your partition code to find the *median* in an array?

Challenge
Given a list of numbers, can you find the median?

Input Format
There will be two lines of input:

- n - the size of the array

- ar - n numbers that makes up the array

Output Format
Output one integer, the median.

Constraints

- $1 \leq n \leq 1000001$

- n is odd

- $-10000 \leq x \leq 10000, x \in ar$

Sample Input

```
7
0 1 2 4 6 5 3
```

Sample Output

```
3
```