

# Find the Median

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
```