

# C: What is the Median?

## Description

Median plays an important role in the world of statistics. By definition, it is a value that divides an array into two equal parts. In this problem you are to determine the current median of some long integers.

Suppose, we have five integers {1,3,6,2,7}. In this case, 3 is the median as it has exactly two integers on its each side. {1,2} and {6,7}.

If there are even number of values like {1,3,6,2,7,8}, a single value cannot split this array into equal two parts, so we consider the average of the middle values {3,6}. Thus, the median will be  $(3 + 6) / 2 = 4.5$ . In this problem, you have to print only the integer part of the median. As a result, according to this example, the median will be 4.

## Input

The input file consists of series of N integers X (  $0 \leq X < 2^{31}$  ), where  $0 < N < 10000$ . The integers may have leading or trailing spaces.

## Output

For each input set, print the current value of the median.

## Sample Input

```
1
3
4
60
70
50
2
```

## Sample Output

```
1
2
3
3
4
27
4
```

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