


# A. Middle number

Time Limit: 5.0 Seconds Memory Limit: 65536K

There is a sequence of integers, we have two operations now

1 add a: means add an integer a to the end of the sequence, forms a N+1 long sequence.

2 mid : Output the current sequence's middle numbera sequence's middle number is the middle position of the sequence when it's sorted by in creasing order.(if the sequence's length is even, then the middle position is the litter number's position of the two middle numbers)

example 1, sequence 1 2 13 14 15 16 and it's middle number is 13

example 2, sequence 1 3 5 7 10 11 17 and it's middle number is 7

example 3, 1 1 1 2 3 and it's middle number is 1

## Input

The first line of the input gives the number of test cases T, for each test case the first line is the sequence's inital length N, the second line has N number represent the integer sequence. then third line is the operation number M then follows M lines, each line has the format either add a or mid (1<=N<=100000, 0<=M<=10000)

## Output

each test case for each mid operation output the middle number

## Sample Input

```
1
6
1 2 13 14 15 16
5
add 5
add 3
mid
add 20
mid
```

## Sample Output

```
5
13
```

*Source: TJU Team Selection Contest 2010 (3)*

Problem ID in problemset: 3515

Tianjin University Online Judge v1.2.4