



STL set

Implement different operations on a set s .

Input:

The first line of input contains an integer T denoting the no of test cases . Then T test cases follow. The first line of input contains an integer Q denoting the no of queries . Then in the next line are Q space separated queries .

A query can be of four types

1. a x (inserts an element x to the set s)
2. b (prints the contents of the set s)
3. c x (erases an element x from the set s)
4. d x (prints 1 if the element x is present in the set else print -1)
5. e (prints the size of the set s)

Output:

The output for each test case will be space separated integers denoting the results of each query .

Constraints:

$$1 \leq T \leq 100$$

$$1 \leq Q \leq 100$$

Example:

Input

```
2
6
a 1 a 2 a 3 b c 2 b
5
a 1 a 5 e d 5 d 2
```

Output

```
1 2 3 1 3
2 1 -1
```

**Explanation :****For the first test case**

There are six queries. Queries are performed in this order

1. a 1 { insert 1 to set now set has {1} }
2. a 2 {inserts 2 to set now set has {1,2} }
3. a 3 {inserts 3 to set now set has {1,2,3} }
4. b {prints the set contents ie 1,2,3}
5. c 2 {removes 2 from the set }
6. b {prints the set contents ie 1,3}

For the second test case

There are five queries. Queries are performed in this order

1. a 1 {inserts 1 to set now set has {1} }
2. a 11 {inserts 11 to set now set has {1,11} }
3. e {prints the size of the set ie 2}
4. d 5 {since five is present prints 1}
5. d 2 {since 2 is not present in the set prints -1}