

Q1.

Input format

The input begin with an integer n on a line, which means that there are n test cases.

And the first character of each following row is the command.

 + : add two complex numbers.

 * : multiply two complex numbers.

 p : print the complex number.

Each complex number contains two integers.

E.g. $a + bi$ where a, b are two integers.

Constraints

Use **class** and **switch** to implement.

Output Format

You must output the result after doing the calculation.

E.g. * 1 2 3 4 means $(1 + 2i) \times (3 + 4i) = -5 + 10i$

If the result number is $-5 + 10i$, then you have to print -5+10i.

Sample Input

```
7
p 0 1
p 1 0
p 1 1
+ 2 3 1 -1
* 1 2 3 4
* -2 -3 -4 -5
* 3 -4 -5 6
```

Sample Output

```
i
1
1+i
3+2i
-5+10i
-7+22i
9+38i
```