

Roman calculator

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[English version](#)

Given string **a** and string **b** your task is to calculate sum, difference, product, quotient or remainder depending on given char **c**.

Input

The first line of the standard input contains one integer **t** ($t < 101$) which is the number of test cases.

In each of the next **t** lines there are string **a** ($1 \leq a \leq V * M$), char **c** ('+', '-', '*', ':', '%') and string **b** ($1 \leq b \leq V * M$).

Output

For each test, print sum if **c**='+', difference if **c**='-', product if **c**='*', quotient if **c**=':', remainder if **c**='%' or *ERROR* if the result equals 0. If the result is negative print '-' in front of it. The result will be integer.

Example

Input:

```
6
II + III
II - III
II * III
VI : III
V % III
I - I
```

Output:

```
V
-I
VI
II
II
ERROR
```