

Your old sixth grade teacher needs help grading math homework! He's made a few mistakes grading papers lately, and wants to make sure his math is correct. Write a simple program that will take an equation setup, and an answer and determine if the answer is correct or not.

## Input

Your program needs to handle positive and negative numbers, and care should be taken to translate integer math to decimal output. Your program needs to be able to read in up to five lines of data in the format of:

```
A# B# operation answer#
```

Examples:

```
100 7 DIVIDE 5.0
7 7 MULTIPLY 49.0
-6 3 POWER 216.0
3 7 SUBTRACT 6.0
3 7 ADD 12.0
```

Your program needs to be able to handle the following operations:

```
POWER
MULTIPLY
DIVIDE
ADD
SUBTRACT
```

Operations should be carried out left to right A# to B# as follows:

```
A# ^ B# (A raised to the power of B)
A# * B# (A multiplied by B)
A# / B# (A divided by B; note the teacher does not give divide by zero problems)
A# + B# (A added to B)
A# - B# (B subtracted from A)
```

Note: either the value for A or B can be negative, except for power ( $A^B$ ) equations, where B will always be non-negative.

## Output

Output all numbers rounded to 1 decimal place. If the student's answer is correct, output:

```
| answer# is correct for A# operation B#
```

If the student's answer is incorrect, output:

```
A# operation B# = correct answer, not answer#
```

Examples:

```
100.0 / 7.0 = 14.3, not 5.0
49.0 is correct for 7.0 * 7.0
-6.0 ^ 3.0 = -216.0, not 216.0
3.0 - 7.0 = -4.0, not 6.0
3.0 + 7.0 = 10.0, not 12.0
```