Victor's Various Adventures - Victor Writes A Math Contest

Time Limit: 3.0s **Memory Limit:** 256M

This is problem 4 of the `Victor's Various Adventures` problem set.

Victor is writing a math contest, and easily solves all of the problems. However, he wants to test you with a very easy problem that was on the contest. To make it even easier for you, he has decided that you can write a program to solve the problem. The problem is as follows:

> We define an *expression* as something that can be evaluated to a real number, or is *directly* one (meaning that it is already a number). An expression is **always** surrounded by *parenthesis* `()`.
>
> **Two** expressions can be combined to form a *nested* expression with an *operator*.
>
> For example, the number `( 11 )` is a *direct* expression, and the *nested* expression `( ( 11 ) + ( ( 49 ) + ( 33 ) ) )` can be evaluated to a real number if the `+` operator is defined.
>
> We will define 3 basic operations:

Operator	Operation
`!`	If the left input is larger than the right, apply addition. Otherwise, apply subtraction.
`@`	If the left input is larger than the right, apply subtraction. Otherwise, apply addition.
`$`	Compute the result with the following formula: $\sqrt{L^2 + R^2}$, where L is the left input, and R is the right input.

To prove your brilliance to Victor, can you solve the problem?

Input Specification

On the first and only line, there will be a valid expression, as specified above. The line will end with the `=` character.

It is guaranteed that all of the numbers in the input are non-negative.

Output Specification

Output the evaluated result to one decimal place.

Sample Input

```
( ( 4 ) ! ( 11.45 ) ) =
```

Sample Output

```
-7.4
```

Explanation for Sample Input 1

In this sample, since $4 < 11.45$, we apply subtraction.

`( ( 4 ) ! ( 11.45 ) )` = $4 - 11.45 = -7.45$

Sample Input 2

```
( ( ( 1.2 ) $ ( 5531 ) ) @ ( ( ( 11 ) ! ( 0.1 ) ) $ ( 44.01 ) ) ) =
```

Sample Output 2

```
5485.6
```