Problem Zero - Funny Formulas

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CSC1015F - sample problem and I/O information

In Celebrity School, questions and answers are a bit confused. Perhaps so are the celebrities, but that's a different matter. They have to attend a class on mathematics with online quizzes, and it is your task to create that. Your program needs to prepare a question to be solved—an equation to be solved—given the answer. Specifically, you have to write a program which finds the simplest possible equation to be solved given the answer, considering all possible equations using the standard mathematical symbols in the usual manner. In this context, simplest can be defined unambiguously in several different ways leading to the same path of resolution.

For now, you are to find the equation whose transformation into the desired answer requires the *least effort*. For example, given the answer $X = 2$, you might create the equation $9 - X = 7$, or you could connive something like $X > 0; X^2 = 4$. These may not be the simplest possible equations. Solving these mind-scratchers might be hard for a celebrity.

Input Each input line contains a solution in the form $< symbol > = < value >$.

Output For each input line, print the simplest system of equations which would to lead to the provided solution, respecting the use of space exactly as in the input.

Sample input

```
Y = 3
X=9
```

Sample output

```
Y = 3
X=9
```

See overleaf for dealing with input and output in Python, so that the automated marker will at least not complain about that.

Note This problem just asks you to print the input, as output ($X = 2$ is already an equation, no matter how simple...).

Dealing with Input/Output

The following explains how one can go about dealing with input and output in Python. If one simply needs to loop through each line of input given, one can do as follows:

```
import sys
for line in sys.stdin:
    # Code here
```

If you are given the number of lines to follow as N:

```
n = int(input())
for i in range(n):
    line = input()
    # Code here
```

If input is terminated with a single '#' character:

```
line = input()
while(line != "#"):
    # Code here
    line = input()
```

In general, each problem will have the given sample input and output as its first test case, to make it easier for you to check that you are taking in input and printing output correctly. However, you will only gain credit for the problem if you solve every test case.