

Problem 640: Solve the Equation

Problem Information

Difficulty: Medium

Acceptance Rate: 45.91%

Paid Only: No

Tags: Math, String, Simulation

Problem Description

Solve a given equation and return the value of `x` in the form of a string `"x=#value"`. The equation contains only `+`, `-` operation, the variable `x` and its coefficient. You should return `"No solution"` if there is no solution for the equation, or `"Infinite solutions"` if there are infinite solutions for the equation.

If there is exactly one solution for the equation, we ensure that the value of `x` is an integer.

Example 1:

Input: equation = "x+5-3+x=6+x-2" **Output:** "x=2"

Example 2:

Input: equation = "x=x" **Output:** "Infinite solutions"

Example 3:

Input: equation = "2x=x" **Output:** "x=0"

Constraints:

* `3 <= equation.length <= 1000` * `equation` has exactly one `=`. * `equation` consists of integers with an absolute value in the range `[0, 100]` without any leading zeros, and the variable `x`. * The input is generated that if there is a single solution, it will be an integer.

Code Snippets

C++:

```
class Solution {  
public:  
    string solveEquation(string equation) {  
  
    }  
};
```

Java:

```
class Solution {  
    public String solveEquation(String equation) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def solveEquation(self, equation: str) -> str:
```