**CryptoCS**

[https://raw.githubusercontent.com/TelerikAcademy/Common/master/logos/telerik-header-logo.png](https://raw.githubusercontent.com/TelerikAcademy/Common/master/logos/telerik-header-logo.png)

***Telerik Academy Season 2016-2017 / C# Advanced Exam - 01 June 2016***

**Task 1: CryptoCS**

**Description**

John and Jane are a simple couple. They want nothing more than to rule the galaxy. To achieve their goal, they need a way to communicate without being understood by anybody else. So they developed a encryption system for transferring important messages between one another.

The encryption system consists of **adding** or **subtracting** numbers from **two different numeral systems**, and print the result in a **third numeral system**.

The **first number is always in 26-based snumeral system**, consisting of the digits a, b, ..., y, z:

| **Digit** | **Value** |
| --- | --- |
| a | 0 |
| b | 1 |
| c | 2 |
| d | 3 |
| ... | .... |
| y | 24 |
| z | 25 |

The **second number is always in 7-based numeral system**, consisting of the digits 0, 1,2,3,4,5 and 6. Each digit in this numeral system has its corresponding value, i.e. the digit 0 has value 0 (you don't say...)

The **result number is always in 9-based numeral system**, consisting of the digits 0, 1,2,3,4,5, 6, 7 and 8. Each digit in this numeral system has its corresponding value, i.e. the digit 2 has value 2 (...)

Your task is to calculate the result of the operation, + or -

**Example**

* Input:

bac (678 in dec)

+

10 (7 in dec)

=

841 (685 in dec)

**Input**

* On the first line you will receive the first number in **26-based** numeral system
* On the second line you will receive the operation **(subtraction (-) or addition (+))**
* On the third line you will receive the second number in **7-based** numeral system

**Output**

* Print the result of the operation with the provided numbers in **9-based** numeral system

**Constraints**

* The input will always be valid and in the described format. There is no need to validate it explicitly.
* The number of digits in any number will always be less or equal to 8192 (2^13)
* The second number will always be smaller or equal than the first
* **Time limit**: **0.5**s
* **Memory limit**: **24** MB

**Sample tests**

**Input**

bac

+

10

**Output**

841

**Input**

xzywvcas

+

66666

**Output**

612462321742