**Equation**

**Description**

Siqi is learning mathematics, and he is interested in solving additive equations: *x + y = z*. In the equation, *x, y, and z* are integers. However, the exact values of *x, y, and z* are unknown. It is in the form alphabets, for example:

ABBAC

+ BAC

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= ACCCD

where each alphabet represents a **distinct** digit (0-9). The same alphabet must represent the same digit. Leading zeros are permissible.

Siqi has no problem finding an answer to this problem. However, now, he wants to know how many solutions are there to a given equation.

**Input**

The input contains three strings *x, y, z* respectively, each of which occupies a line. Each string contains only alphabets ‘A’ – ‘G’. The length of each string is between 1 and 9 (inclusive).

**Output**

Output the number of solutions to the input equation.

**Sample Input 1**

AB

AB

BC

**Sample Output 1**

5

**Explanation:**

The solutions are 12+12=24, 24+24=48, 25+25 = 50, 37+37=74, 49+49 = 98

**Sample Input 2**

AB

AA

AC

**Sample Output 2**

0

**Explanation:**

Impossible.

**Hint:**

Use recursion.

Recursively decide which digit (0-9) do letters A – G represent respectively. Ignore the letters that do not appear in the input.