



Alpha Java Mar'18 - Advanced - 04:59:38

# Expressions

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✓ **Points:** 100 (partial)

🕒 **Time limit:** 1.0s

C#: 0.8s

📦 **Memory limit:** 16M

C#: 32M

✍️ **Author:**

[doncho](#)

Coki loves numbers. Yet, he cannot use them. Alas, he is that smart...

Now he wants to calculate expressions! He has digits and a number. His task is to generate all valid mathematical expressions that can be done with the digits by inserting operators '+', '\*' or '-', between the digits, excluding at the beginning and the end.

Example:

From 123 the valid expressions are:

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```
1*2+3 = 5
1*2-3 = -1
1*23 = 23
1+2*3 = 7
1+2+3 = 6
1+2-3 = 0
1+23 = 24
1-2*3 = -5
1-2+3 = 2
1-2-3 = -4
1-23 = -22
12*3 = 36
12+3 = 15
12-3 = 9
123 = 123
```

Alpha Java Mar'18 - Advanced - 04:59:38

Help Coki to count the expressions, that evaluate to the **provided number**

## Input

The input will be on the standard input

- On the first line of the input, you will find the sequence of digits
- On the second line of the input, you will find the number

The input will be valid and there is no need to check it explicitly

## Output

- Print the output on the standard output
- On the first line print the number 
  - The count of possible valid expressions

## Constraints

- The digits will always be at most 14

## Sample tests

### Input

```
123
6
```

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2

Alpha Java Mar'18 - Advanced - 04:59:38

## Input

105  
5

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## Output

2

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## Input

000  
0

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## Output

9

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## Explanation

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0+0-0  
0+0\*0  
0-0+0  
0-0-0  
0-0\*0  
0\*0+0  
0\*0-0  
0\*0\*0

Alpha Java Mar'18 - Advanced - 04:59:38

## Input

1111  
1

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## Output

7

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## ? Clarifications

on Dec. 22, 2017, 2:48 p.m.

The division operator "/" cannot be used. Bug fixed in description