

Problem: Beautiful Days at Movies:

Lily likes to play games with integers and their *reversals*. For some integer x , we define $rev(x)$ to be the reversal of all digits in x . For example, $rev(123) = 321$, $rev(120) = 21$, and $rev(10) = 1$.

Logan wants to go to the movies with Lily on some day d satisfying $0 \leq d \leq n$, but he knows she only goes to the movies on days she considers to be *beautiful*. Lily considers a day to be *beautiful* if the absolute value of the difference between d and $rev(d)$ is evenly divisible by k .

Given n , k , and d , count and print the number of *beautiful* days when Logan and Lily can go to the movies.

Input Format

A single line of three space-separated integers describing the respective values of n , k , and d .

Constraints

- $0 \leq n < 10^9$
- $1 \leq k \leq 10^9$

Output Format

Print the number of *beautiful* days in the inclusive range between 0 and n .

Sample Input

```
20 23 6
```

Sample Output

```
2
```

Explanation

Logan wants to go to the movies on days $0, 1, 2, \dots, 20$. We perform the following calculations to determine which days are *beautiful*:

- Day 0 is *beautiful* because the following evaluates to a whole number:
$$\frac{|0 - rev(0)|}{23} = \frac{0}{23} = 0$$
- Day 1 is *not beautiful* because the following doesn't evaluate to a whole number:
$$\frac{|1 - rev(1)|}{23} = \frac{0}{23} = 0$$
- Day 2 is *beautiful* because the following evaluates to a whole number:
$$\frac{|2 - rev(2)|}{23} = \frac{0}{23} = 0$$
- Day 3 is *not beautiful* because the following doesn't evaluate to a whole number:
$$\frac{|3 - rev(3)|}{23} = \frac{0}{23} = 0$$

Only two days, 0 and 2 , in this interval are beautiful. Thus, we print 2 as our answer.

Solution

```
long reverse(long num)
```

```
{
    long find=0;
    int exit=0;
    while(exit!=1)
    {
        if(num/10==0) {exit=1;}
        find=(find*10)+num%10;
        num=num/10;
    }
    return find;
}
```

```
int main()
```

```
{
    long num, i, j, k, counter=0;
    cin>> i>> j>> k;

    for(int a=i; a<=j; a++)
        { ( abs( a-reverse(a) )%k==0 ? counter+=1 : counter+=0);}

    cout<<counter;
    return 0;
}
```

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