

## Problem Statement

The digit sum of an integer is the sum of its digits in decimal notation. For example, the digit sum of 1234 is  $1+2+3+4=10$ , and the digit sum of 3443 is  $3+4+4+3=14$ .

You are given three integers: **A**, **B** and **C**. Return the integer **X** between **A** and **B**, inclusive, such that the absolute difference between the digit sum of **X** and the digit sum of **C** is as small as possible. If there are multiple possible values for **X**, return the smallest among them.

## Definition

Class: MinimalDifference  
Method: findNumber  
Parameters: int, int, int  
Returns: int  
Method signature: int findNumber(int A, int B, int C)  
(be sure your method is public)

## Constraints

- **A**, **B** and **C** will each be between 1 and 1,000,000,000, inclusive.
- **B-A** will be between 0 and 100,000, inclusive.

## Examples

0)  
1  
9  
10  
Returns: 1  
The digit sum of C is  $1+0=1$ . Of the integers between 1 and 9, inclusive, only 1 has a digit sum equal to 1.

1)  
11  
20  
20  
Returns: 11  
The digit sum of C is  $2+0=2$ . Of the integers between 11 and 20, inclusive, there are two which also have a digit sum of 2: 11 ( $1+1=2$ ) and 20 ( $2+0=2$ ). We choose 11 because it is smaller than 20.

2)  
1  
1  
999  
Returns: 1

3)  
100  
1000  
99  
Returns: 189

4)  
1987  
9123  
1  
Returns: 2000