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Tight Arrays

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Problem

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We call an array of integers *tight* if every pair of adjacent integers in the array has an absolute difference ≤ 1 . For example, the array $[3, 4, 4, 3, 2, 1, 2, 3, 4, 4, 5, 5]$ is tight, but the array $[1, 2, 4, 3, 3]$ is not:



The diagram above shows the absolute differences between each pair of adjacent elements. Note that the second array is *not* tight, because it has a pair of adjacent elements whose absolute difference is greater than 1.

Given a , b , and c , complete the function below by returning the length of the shortest tight array such that the first element is a , the last element is c , and the array contains b .

Input Format

Three space-separated integers describing the respective values of a , b , and c .

Constraints

- $1 \leq a, b, c \leq 100$

Output Format

Return a single integer denoting the length of the shortest tight array such that the first element is a , the last element is c , and the array contains the element b .

Sample Input 0

```
5 7 11
```

Sample Output 0

```
7
```

Explanation 0

Given $a = 5$, $b = 7$, and $c = 11$, we want to find the length of the shortest tight array starting with a , ending with c , and containing b .

The shortest possible tight array we can construct is $[5, 6, 7, 8, 9, 10, 11]$. We then return its length, 7 , as our answer.

Sample Input 1

```
3 1 2
```

Sample Output 1

4

Explanation 1

Given $a = 3$, $b = 1$, and $c = 2$, the shortest possible tight array we can construct is $[3, 2, 1, 2]$. We then return its length, 4 , as our answer.

Sample Input 2

5 5 6

Sample Output 2

2

Explanation 2

Given $a = 5$, $b = 5$, and $c = 6$, the shortest possible tight array we can construct is $[5, 6]$. We then return its length, 2 , as our answer.

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Submissions: 1444

Max Score: 15

Difficulty: Easy

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C#



```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 using System.Linq;
5 class Solution {
6
7     static int shortestTightArray(int a, int b, int c){
8         // Complete this function
9
10        int res = 0;
11
12        if (a <= c )
13        {
14            if (b >= a && b <= c)
15            {
16                res = c - a + 1;
17                return res;
18            }
19        }
20        else if (c <= a )
21        {
22            if (b >= c && b <= a)
23            {
24                res = a - c + 1;
25                return res;
26            }
27        }
28        if (b <= a && b <= c)
29        {
30
31            res = (a - b) + (c-b) + 1;
32
33
34            return res;
35        }
36        if (b >= a && b >= c)
```

```
37 {  
38     res = (b - a) + (b - c) + 1;  
39  
40 }  
41  
42     return res;  
43  
44 }  
45  
46 static void Main(String[] args) {  
47     string[] tokens_a = Console.ReadLine().Split(' ');  
48     int a = Convert.ToInt32(tokens_a[0]);  
49     int b = Convert.ToInt32(tokens_a[1]);  
50     int c = Convert.ToInt32(tokens_a[2]);  
51     int result = shortestTightArray(a, b, c);  
52     Console.WriteLine(result);  
53 }  
54 }  
55 }
```

Line: 31 Col: 17

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