Codility_

Candidate Report: trainingA4S8W9-QP4

Check out Codility training tasks

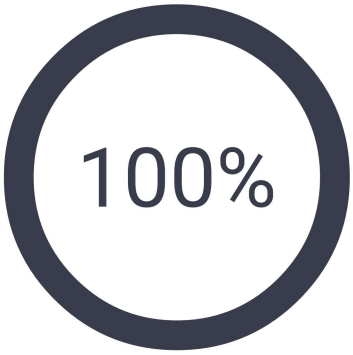
Test Name:

Summary Review (0) Timeline

Tasks summary

Task	Time spent	Score
CountDiv Java 8	1 min	100%

Total score



Tasks Details

Medium

1. CountDiv

Compute number of integers divisible by k in range [a..b].

Task Score	Correctness	Performance
100%	100%	100%

Task description

Write a function:

```
class Solution { public int solution(int A, int B, int K); }
```

that, given three integers A, B and K, returns the number of integers within the range [A..B] that are divisible by K, i.e.:

{ i : A ≤ i ≤ B, i **mod** K = 0 }

For example, for A = 6, B = 11 and K = 2, your function should return 3, because there are three numbers divisible by 2 within the range [6..11], namely 6, 8 and 10.

Write an **efficient** algorithm for the following assumptions:

- A and B are integers within the range [0..2,000,000,000];
- K is an integer within the range [1..2,000,000,000];
- A ≤ B.

Solution

Programming language used:	Java 8
Total time used:	1 minutes
Effective time used:	1 minutes
Notes:	*not defined yet*

Task timeline

04:56:28 04:57:15

Code: 04:57:14 UTC, java, final, score: **100** show code in pop-up

```
1  // you can also use imports, for example:
2  // import java.util.*;
3
4  // you can write to stdout for debugging purposes, e.g.
5  // System.out.println("this is a debug message");
6
7  class Solution {
```

```
8      public int solution(int A, int B, int K) {
9          // write your code in Java SE 8
10         if (A % K == 0)
11             return (B / K) - (A / K) + 1;
12
13         return (B / K) - (A / K);
14     }
15 }
```

Analysis summary

The solution obtained perfect score.

Analysis

Detected time complexity: **O(1)**

expand all	Example tests	
▶ example A = 6, B = 11, K = 2		✓ OK
expand all	Correctness tests	
▶ simple A = 11, B = 345, K = 17		✓ OK
▶ minimal A = B in {0,1}, K = 11		✓ OK
▶ extreme_ifempty A = 10, B = 10, K in {5,7,20}		✓ OK
▶ extreme_endpoints verify handling of range endpoints, multiple runs		✓ OK
expand all	Performance tests	
▶ big_values A = 100, B=123M+, K=2		✓ OK
▶ big_values2 A = 101, B = 123M+, K = 10K		✓ OK
▶ big_values3 A = 0, B = MAXINT, K in {1,MAXINT}		✓ OK
▶ big_values4 A, B, K in {1,MAXINT}		✓ OK