Codility_

## Candidate Report: trainingA9HMCM-JPG

Check out Codility training tasks

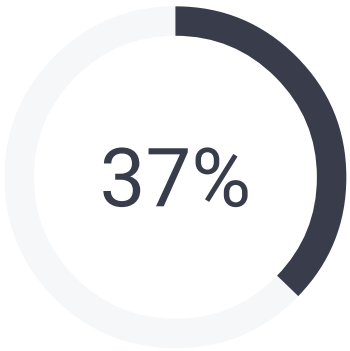
Test Name:

Summary Timeline

### Tasks summary

| Task | Time spent | Score |
|---|---|---|
| **CountDiv** C | 3 min | 37% |

### Total score




## Tasks Details

Medium

### 1. CountDiv

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

| Task Score | Correctness | Performance |
|---|---|---|
| 37% | 50% | 25% |

### Task description

Write a function:

```
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.:

$$\{ i : A \le i \le B, i \bmod K = 0 \}$$

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:

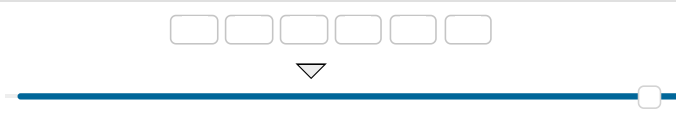
- A and B are integers within the range [0..2,000,000,000];
- K is an integer within the range [1..2,000,000,000];
- A ≤ B.



### Solution

| | |
|---|---|
| Programming language used: | C |
| Total time used: | 3 minutes |
| Effective time used: | 3 minutes |
| Notes: | *not defined yet* |

### Task timeline



07:16:23 07:19:08

Code: 07:19:07 UTC, c, final, score: **37** show code in pop-up

```
1  // you can write to stdout for debugging purposes, e.g.
2  // printf("this is a debug message\n");
3
4  int solution(int A, int B, int K) {
5      // write your code in C99 (gcc 6.2.0)
6      int ret = (B-A)/K;
7      int tmp = ((B-A)%K-B%K+A%K)>=0?((B-A)>K?1:0):0;
8      //printf("%d,%d",(int)((B-A)/K),((B-A)%K-B%K+A%K)>=0?1
```

```
9       return ret + tmp;
10  }
```

## Analysis summary

The following issues have been detected: wrong answers.

For example, for the input `[0, 0, 11]` the solution returned a wrong answer (got 0 expected 1).

## Analysis

| collapse all | Example tests | |
|---|---|---|
| ▼ example<br>A = 6, B = 11, K = 2 | | ✓ OK |
| 1. 0.001 s OK | | |
| expand all | Correctness tests | |
| ▼ simple<br>A = 11, B = 345, K = 17 | | ✓ OK |
| 1. 0.001 s OK | | |
| ▼ minimal<br>A = B in {0,1}, K = 11 | | ✗ WRONG ANSWER<br>got 0 expected 1 |
| 1. 0.001 s WRONG ANSWER, got 0 expected 1 | | |
| 2. 0.001 s OK | | |
| ▶ extreme_ifempty<br>A = 10, B = 10, K in {5,7,20} | | ✗ WRONG ANSWER<br>got 0 expected 1 |
| ▶ extreme_endpoints<br>verify handling of range endpoints, multiple runs | | ✓ OK |
| expand all | Performance tests | |
| ▶ big_values<br>A = 100, B=123M+, K=2 | | ✓ OK |
| ▶ big_values2<br>A = 101, B = 123M+, K = 10K | | ✗ WRONG ANSWER<br>got 12346 expected 12345 |
| ▶ big_values3<br>A = 0, B = MAXINT, K in {1,MAXINT} | | ✗ WRONG ANSWER<br>got 1 expected 2 |
| ▶ big_values4<br>A, B, K in {1,MAXINT} | | ✗ WRONG ANSWER<br>got 0 expected 1 |