

Codility

CodeCheck Report: trainingKAFNXC-5R3

Test Name:

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Summary

Timeline

Tasks summary

Task	Time spent	Score
CountDiv Python	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:

```
def solution(A, B, 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.:

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

For example, for A = 6, B = 11 and K = 2, your function should return 3, because there are three numbers

Solution

Programming language used: Python

Total time used: 1 minutes ?

Effective time used: 1 minutes ?

Notes: not defined yet

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];
- $A \leq B$.

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Task timeline



15:13:49

15:14:21

Code: 15:14:21 UTC, py, [show code in pop-up](#)
final, score: 100

```

1  # you can write to stdout for debugging
2  # print("this is a debug message")
3
4  def solution(A, B, K):
5      # Implement your solution here
6      # pass
7      count = B // K - A // K
8      if A % K == 0:
9          count += 1
10     return count

```

Analysis summary

The solution obtained perfect score.

Analysis

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

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

A = 0, B = MAXINT, K in
{1,MAXINT}

▶ big_values4

✓ OK

A, B, K in {1,MAXINT}