



CodeCheck Report: training5UT447-9JR

Test Name:

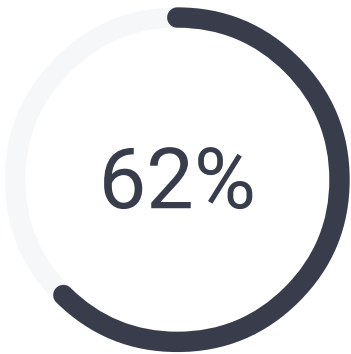
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Summary Timeline AI Assistant Transcript

Tasks summary

Task	Time spent	Score
CountDiv	12 min	62%

Total score



Tasks Details

Medium	1. CountDiv	Task Score	Correctness	Performance
	Compute number of integers divisible by k in range [a..b].	62%	50%	75%

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.:

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

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

Programming language used:	C++
Total time used:	12 minutes
Effective time used:	12 minutes
Notes:	<i>not defined yet</i>

Task timeline



Code: 15:26:55 UTC, cpp, [show code in pop-up](#)
final, score: 62

```
1 // you can use includes, for example:
2 // #include <algorithm>
3
```

```
4 // you can write to stdout for debugging purposes
5 // cout << "this is a debug message" << endl;
6
7 int solution(int A, int B, int K) {
8     int first = ((A % K) == 0) ? A : (A / K +
9
10     if (first > B) return 0;
11
12     return (B / K) - ((A - 1) / K);
13 }
```

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

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	✗	WRONG ANSWER
A = B in {0,1}, K = 11		got 0 expected 1	
<hr/>			
1.	0.001 s	WRONG ANSWER, got 0 expected 1	
2.	0.001 s	OK	
▶		extreme_ifempty	✓ OK
A = 10, B = 10, K in {5,7,20}			
▼	extreme_endpoints	✗	WRONG ANSWER
verify handling of range endpoints, multiple runs		got 7 expected 8	
<hr/>			
1.	0.001 s	OK	
2.	0.001 s	OK	
3.	0.001 s	OK	
4.	0.001 s	OK	
5.	0.001 s	WRONG ANSWER, got 7 expected 8	
6.	0.001 s	WRONG ANSWER, got 6 expected 7	
expand all		Performance tests	
▶	big_values	✓	OK
A = 100, B=123M+, K=2			
▶	big_values2	✓	OK
A = 101, B = 123M+, K = 10K			
▼	big_values3	✗	WRONG ANSWER
A = 0, B = MAXINT, K in {1,MAXINT}		got 1 expected 2	
<hr/>			
1.	0.001 s	OK	
2.	0.001 s	WRONG ANSWER, got 1 expected 2	
▶		big_values4	✓ OK
A, B, K in {1,MAXINT}			