cødılıty

Candidate Report: Anonymous

Test Name:

Summary   Timeline

Test Score

100 out of 100 points

100%

Tasks in Test

	Time Spent ⓘ	Task Score
FrogJmp Submitted in: Python	4 min	100%

TASKS DETAILS

1.
FrogJmp
Count minimal number of jumps from position X to Y.

EASY

Task Score	Correctness	Performance
100%	100%	100%

Task description

A small frog wants to get to the other side of the road. The frog is currently located at position X and wants to get to a position greater than or equal to Y. The small frog always jumps a fixed distance, D.

Count the minimal number of jumps that the small frog must perform to reach its target.

Write a function:

```
def solution(X, Y, D)
```

that, given three integers X, Y and D, returns the minimal number of jumps from position X to a position equal to or

Solution

Programming language used:	Python
Total time used:	4 minutes ❓
Effective time used:	4 minutes ❓
Notes:	*not defined yet*

greater than Y.

For example, given:

```
X = 10
Y = 85
D = 30
```

the function should return 3, because the frog will be positioned as follows:

- after the first jump, at position 10 + 30 = 40
- after the second jump, at position 10 + 30 + 30 = 70
- after the third jump, at position 10 + 30 + 30 + 30 = 100

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

- X, Y and D are integers within the range [1..1,000,000,000];
- $X \le Y$.

Task timeline

❓

11:11:10   11:14:15

Code: 11:14:15 UTC, py, final, score: **100**   show code in pop-up

```
1    def solution(X, Y, D):
2        import math
3
4        return math.ceil((Y-X)/D)
```

Analysis summary

The solution obtained perfect score.

Analysis ❓

Detected time complexity: $O(1)$

expand all	Example tests	
▶ example example test	✓ OK	

expand all	Correctness tests	
▶ simple1 simple test	✓ OK	
▶ simple2	✓ OK	
▶ extreme_position no jump needed	✓ OK	
▶ small_extreme_jump one big jump	✓ OK	

expand all	Performance tests	
▶ many_jump1 many jumps, D = 2	✓ OK	
▶ many_jump2 many jumps, D = 99	✓ OK	
▶ many_jump3 many jumps, D = 1283	✓ OK	
▶ big_extreme_jump maximal number of jumps	✓ OK	
▶ small_jumps many small jumps	✓ OK	

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