Open Feedback Dialog
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Demo ticket

Session

ID: demoBW9FZV-A2E
Time limit: 120 min.

Status: closed

Created on: 2014-12-11 10:14 UTC
Started on: 2014-12-11 10:15 UTC
Finished on: 2014-12-11 10:27 UTC

Tasks in test	Correctness	Performance	Task score
1 FrogJmp	100%	100%	100%

Test score

100%

100 out of 100 points

EASY

1. FrogJmp

Count minimal number of jumps from position X to Y.

score: 100 of 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 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

Assume that:

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

Complexity:

- expected worst-case time complexity is O(1);
- expected worst-case space complexity is O(1).

Solution

Programming language used: Ruby

Total time used: 12 minutes

Effective time used: 12 minutes

Notes: *not defined yet*

Task timeline

Code: 10:27:03 UTC, rb, final, score: **100.00**

```ruby
# you can use puts for debugging purposes, e.g.
# puts "this is a debug message"

def solution(x, y, d)
    ((y - x) / d.to_f).ceil
end
```

Analysis

Detected time complexity:
O(1)

test	time	result

test	time	result
Example tests		
example example test	0.064 s	**OK**
Correctness tests		
simple1 simple test	0.056 s	**OK**
simple2	0.060 s	**OK**
extreme_position no jump needed	0.056 s	**OK**
small_extreme_jump one big jump	0.060 s	**OK**
Performance tests		
many_jump1 many jumps, D = 2	0.064 s	**OK**
many_jump2 many jumps, D = 99	0.056 s	**OK**
many_jump3 many jumps, D = 1283	0.060 s	**OK**
big_extreme_jump maximal number of jumps	0.056 s	**OK**
small_jumps many small jumps	0.064 s	**OK**

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