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Training center

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Demo ticket

Session

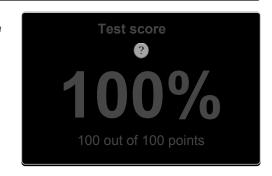
ID: demo9T7Y52-3DH Time limit: 120 min.

Status: closed

Created on: 2014-03-17 15:58 UTC Started on: 2014-03-17 15:58 UTC Finished on: 2014-03-17 15:59 UTC

Tasks in test

Task score



FASY

1. FrogJmp

Count minimal number of jumps from position X to Y.





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

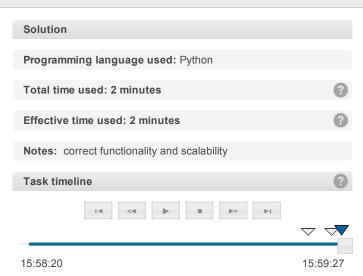
Assume that:

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

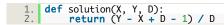
Complexity:

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

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Code: 15:59:27 UTC, py, final, score: 100.00



Analysis



test	time	result
example example test	0.050 s.	ок
simple1 simple test	0.050 s.	ок
simple2	0.050 s.	ок
extreme_position	0.050 s.	ок

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no jump needed		
small_extreme_jump one big jump	0.050 s.	ок
many_jump1 many jumps, D = 2	0.050 s.	ок
many_jump2 many jumps, D = 99	0.050 s.	ок
many_jump3 many jumps, D = 1283	0.050 s.	ок
big_extreme_jump maximal number of jumps	0.050 s.	ок
small_jumps many small jumps	0.050 s.	ок

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