Codility_
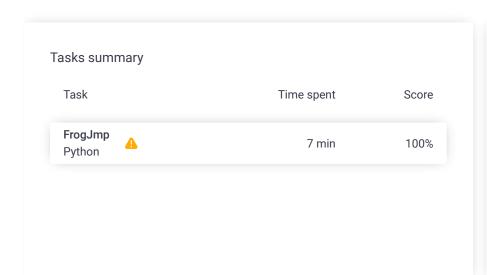
Candidate Report: trainingDNGWM3-XRG

Check out Codility training tasks

Test Name:

Summary   Timeline

Tasks summary

Task		Time spent	Score
FrogJmp ⚠ Python		7 min	100%

Total score

100%

Tasks Details

Easy

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

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 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:

Solution

Programming language used:	Python
Total time used:	7 minutes ❓
Effective time used:	7 minutes ❓
Notes:	*not defined yet*

Task timeline ❓

⬜ ⬜ ⬜ ⬜ ⬜ ⬜

09:49:14   09:55:52

Code: 09:55:52 UTC, py, final, score: **100**	show code in pop-up

- 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 ≤ Y.

```
1   # you can write to stdout for debugging purposes, e.g.
2   # print("this is a debug message")
3
4   def solution(X, Y, D):
5       # write your code in Python 3.6
6       dis = Y - X
7       if dis%D==0:
8           return dis//D
9       return dis//D + 1
```

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