



Novetta - PyCon Challenge 2020

Apr 16, 2020, 05:30 PM IST - May 29, 2020, 09:29 AM IST

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Height equality

Max. score: 100

This problem is no longer available for practice. Apology for any inconvenience!

You are given the heights of two persons as H_a and H_b . You have to make their heights equal. The operations that can be applied to make them equal are the following:

- Increase the height of any one person at a time with the amount of height he had initially (before performing any operation).
- Increase the height of both persons at a time with the amount of height they had initially.

To do one operation it takes 1 second. Each operation can be performed multiple numbers of times.

Your task is to find the minimum time in which the height of the two persons become equal.

Input format

The first line contains two space-separated integers denoting H_a and H_b .

Output format

Print the minimum time in which the heights of the two people become equal.

Constraints

$$1 \leq H_a, H_b \leq 10^9$$

Input1:

8 3

Output1:

7

Input2:

6 4

Output2:

2

SAMPLE INPUT



1 2

SAMPLE OUTPUT



1

Explanation

If we apply first operation one time on 1st person, his height will become $1 + 1 = 2$ which is equal to another person's height. Hence, it takes 1 second to make their height equal.

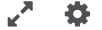
?

Time Limit:	10.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Score is assigned if any testcase passes.
Allowed Languages:	Python 3

CODE EDITOR

Save

Python 3 (python 3.9.5)



```
1 def calculate_time(a, b):
2     a = int(a)
3     b = int(b)
4     final = lcm(a, b)
5     initial_a = a
6     initial_b = b
7     time = 0
8     while((a + initial_a <= final) and (b + initial_b <= final)):
9         time = time + 1
10        a = a + initial_a
11        b = b + initial_b
12    while(a + initial_a <= final):
13        time = time + 1
14        a = a + initial_a
15    while(b + initial_b <= final):
16        time = time + 1
17        b = b + initial_b
18    return time
19
20 def gcd(a,b):
21     if a == 0:
22         return b
23     return gcd(b % a, a)
24
25 def lcm(a, b):
```



1:1 vscode



Test against custom input ▲

Compile & Test code

Submit code

1 2

Log ID: 206371469 / Jun 24, 2022 08:27 AM IST

RESULT: Sample Test Cases Passed 🟢

[Refer judge environment](#)

Note: When you **Compile**, the code is run against sample inputs. When you **Submit code**, the code is run against sample input as well as multiple hidden test cases. In order to solve the problem, your code must pass all of the test cases.

Time (sec)	Memory (KiB)	Language
0.016707	2	Python 3

Input

?

1 2

Output

1

Expected Correct Output

1

Your Rating: ★★★★★ Like 0 Share

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