

Curso > Week 2... > 4. Func... > Exercis...

Audit Access Expires 5 de ago de 2020

You lose all access to this course, including your progress, on 5 de ago de 2020.

Exercise: gcd iter

Finger Exercises due Aug 5, 2020 20:30 -03 Completo

Exercise: gcd iter

5.0/5.0 points (graded)

ESTIMATED TIME TO COMPLETE: 5 minutes

The greatest common divisor of two positive integers is the largest integer that divides each of them without remainder. For example,

- gcd(2, 12) = 2
- gcd(6, 12) = 6
- gcd(9, 12) = 3
- gcd(17, 12) = 1

Write an iterative function, gcdIter(a, b), that implements this idea. One easy way to do this is to begin with a test value equal to the smaller of the two input arguments, and iteratively reduce this test value by 1 until you either reach a case where the test divides both a and b without remainder, or you reach 1.

```
1 def gcdIter(a, b):
3
     a, b: positive integers
4
     returns: a positive integer, the greatest common divisor of a & b.
7
     # Your code here
8
     it a < b:
9
         # Começa por a
```

```
10
          inicio = a
11
     else:
12
          # Começa por b
13
          inicio = b
14
      for mdc in range(inicio, 0, -1):
          if (a % mdc == 0) and (h % mdc == 0).
```

Press ESC then TAB or click outside of the code editor to exit

Correta

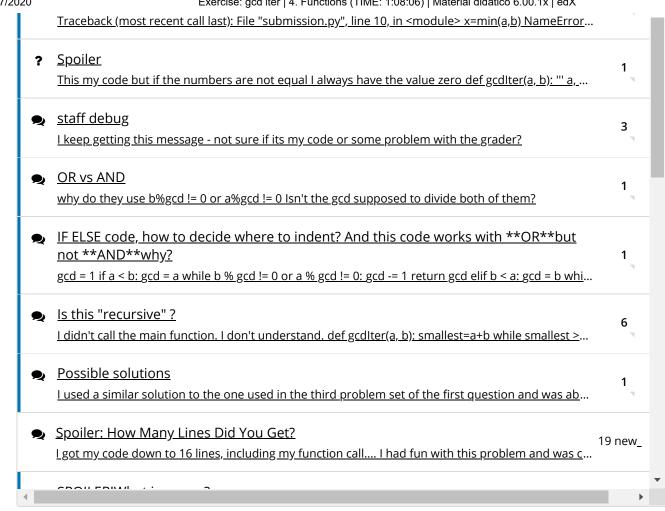
```
def gcdIter(a, b):
   a, b: positive integers
   returns: a positive integer, the greatest common divisor of a & b.
   testValue = min(a, b)
   # Keep looping until testValue divides both a & b evenly
   while a % testValue != 0 or b % testValue != 0:
        testValue -= 1
    return testValue
```

Test results

ORRECT		<u>Hide outpu</u>
	Test: gcdIter(190, 170)	
	Output:	
	10	
	Test: gcdIter(228, 342)	
	Output:	
	114	

Test: gcdIter(136, 170)
Output:
34
Test: gcdIter(126, 180)
Output:
18
Test: gcdIter(225, 81)
Output:
9
Test: gcdIter(42, 42)
Output:
42
Test: gcdIter(414, 324)
Output:
18
Test: gcdIter(160, 112)
Output:

	16		
	Test: gcdIter(126, 288)		
	Output:		
	18		
	Test: gcdIter(22, 44)		
	Output:		
	22		
		<u> Hide outpu</u>	
Enviar			
Answe	rs are displayed within the problem		
cercise:	gcd iter	Ocultar discussão	
	/ Exercise: gcd iter	Ocuitar discussão	
Show all post	ss 🗸	por atividade recente 🗸	
-	min and max and a>b and b>a no point in them. Just set your other variable that is going to be the gcd to jus	st be a or b	
	g i learned today: Read the output Carefully time and nerves thats all i have to say after 20 min of anger and frustration	3	
-	Where to start	4 > <u>b factor = b</u>	
How do	e a variable (factor) as either a or b depending on which is the biggest (eg: if a		
This is the	e a variable (factor) as either a or b depending on which is the biggest (eg: if a o I initialize variable a ???? ne error in my code: NameError: name 'a' is not defined	2	



© All Rights Reserved