

MITx: 6.00.1x Introduction to Computer Science and Programming ...

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▶ Week 1: **Python Basics**

▼ Week 2: <u>Simple</u> **Programs**

3. Simple **Algorithms (TIME:** 41:06)

Finger Exercises 4. Functions

(TIME: 1:08:06) **B** Finger Exercises

Complete Programming Experience: polysum

Problem Set 2 Problem Set due Feb 2, 2017 15:30 PST

▶ Week 3: Structured

Exercise: gcd iter

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Exercise: gcd iter 5.0 points possible (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,

Week 2: Simple Programs > 4. Functions (TIME: 1:08:06) > Exercise: gcd iter

• gcd(2, 12) = 2

• gcd(6, 12) = 6

• gcd(9, 12) = 3

• gcd(17, 12) = 1

Write an iterative function, <code>gcdIter(a, b)</code>, 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
5
     returns: a positive integer, the greatest common divisor
6
7
     # Your code here
```

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



<u>Types</u> Unanswered Week 4: Good **Programming Practices** Submit Midterm Exam Exercise: gcd iter <u>Sandbox</u> **Show Discussion** Topic: Lecture 4 / Exercise: gcd iter

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