Alex Elko

Mr. Kim

Adv. Computer Science

November 5, 2019

Advanced PS: Fractions

PW. 1.

1. gcd ( 12 , 18 ) = 6
2. gcd ( 18 , 54 ) = 18
3. gcd ( 15 , 24 ) = 3
4. gcd ( 23 , 51 ) = 1

PW. 2.

* When a and b equal each other

PW. 3.

* If b is greater than a, subtract a from b.
* Continue until either a == b or a is greater than b.
* If a is greater than b, then switch a and b and then subtract a from b.
* Repeat process until a == b.
* Both a and b are gcd.

PW. 4. Iterative gcd

def find\_gcd(a,b):

while a != b:

if b > a:

b -= a

else:

c = b

b = a

a = c

b -=a

return a

PW. 5. Recursive gcd

def recur\_gcd(a,b):

if a == b:

return a

if b > a:

return recur\_gcd(a, b-a)

else:

return recur\_gcd(b, a-b)