

### 6.00 Handout, Lecture 3 (Not intended to make sense outside of lecture)

```
x = 3
y = 0
itersLeft = x
while (itersLeft > 0):
    y = y + x
    itersLeft = itersLeft - 1
    #print 'y = ', y, ',itersLeft = ',
itersLeft
print y
-----
```

```
#Find square root of a perfect square
ans = 0
while ans*ans <= x:
    ans = ans + 1
print ans
-----
```

```
#find gcd of two integers
int1 = int(raw_input('Enter an integer: '))
int2 = int(raw_input('Enter an integer: '))
smaller = min(int1, int2)
for i in range(1, smaller + 1):
    if int1%i == 0 and int2%i == 0:
        gcd = i
print 'GCD of', int1, 'and', int2, '=', gcd
```

```
smaller = min(int1, int2)
for i in range(smaller, 0, -1):
    if int1%i == 0 and int2%i == 0:
        break
print 'GCD of', int1, 'and', int2, '=', i
```

```
ans = 0
if x >= 0:
    while ans*ans < x:
        ans = ans + 1
    if ans*ans != x:
        print x, 'is not a perfect square'
    else: print 'Square root of', x, '=', ans
else: print x, 'is a negative number'
```

```
smaller = min(int1, int2)
i = smaller
gcd = None
while i >= 1 and gcd == None:
    if int1%i == 0 and int2%i == 0:
        gcd = i
        i = i - 1
print 'GCD of', int1, 'and', int2, '=', gcd
```

```
sumDigits = 0
for c in str(1952):
    sumDigits += int(c)
print sumDigits
```

```
divisors = ()
for i in range(1,x):
    if x%i == 0:
        divisors = divisors+(i,)
print divisors
```