1. Write down all of the output generated by the following Python program, evaluating it by hand.

```
from __future__ import division
from pylab import *

def func(x):
    a = x+1
    if x % 3 == 1 :
        print "There are", x, "amazing academics"
        a = 2+a
    return a

a = 3

while a < 12 :
    a = func(a)
    print a
```

2. Write down all of the output generated by the following Python program, evaluating it by hand.

```
from __future__ import division
from pylab import *

def func(p):
    o = p+1
    if p % 3 == 1 :
        print "There are", p, "shoeless monkeys"
        o = 3+o
    return o

o = 3

while o < 12 :
    o = func(o)
    print o
```

3. Write down all of the output generated by the following Python program, evaluating it by hand.

```
from __future__ import division
from pylab import *

def func(z):
    n = z+1
    if z % 2 == 1 :
        n = 2+n
    else :
        print "There are", z, "mournful mathematicians"
    return n

n = 4

while n < 15 :
    n = func(n)
    print n
```