CS414: Recitation # 3

NAME:_____

1. Which data type would most appropriately be used to represent the following data values?

a) The number of months in a year

b) The area of a circle

c) The current minimum wage

d) The approximate age of the universe (12,000,000,000 years)

e) Your name

2. Let **x = 8** and **y = 2**. Write the values of the following expressions:

a) **x + y * 3**

b) **(x + y) * 3**

c) **x ** y**

d) **x % y**

e) **x / 12.0**

f) **x / 6**

3. Write the outputs of the following loops:

a)
```
for count in xrange(5):
    print count + 1,
```

b)
```
for count in xrange(1, 4):
    print count,
```

c)
```
for count in xrange(1, 6, 2):
    print count,
```

d)
```
for count in xrange(6, 1, -1):
    print count,
```

4. What happens when the programmer forgets to update the loop control variable in a while loop?

5. Consider the following code segment:

```
count = 5
while count > 1:
    print count,
    count -= 1
```

What is the output produced by this code?

a) 1 2 3 4 5

b) 2 3 4 5

c) 5 4 3 2 1

d) 5 4 3 2

6. Consider the following code segment:

```
count = 1
while count <= 10:
    print count,
```

Which of the following describes the error in this code?

a) The loop is off by 1.

b) The loop control variable is not properly initialized.

c) The comparison points the wrong way.

d) The loop is infinite.

7. Assume that the variable **data** refers to the string **"myprogram.exe"**. Write the values of the following expressions:

a) **data[2]**

b) **data[-1]**

c) **len(data)**

d) **data[0:8]**

e) **"gram" in data and "pro" in data**

8. If **data** is the string **"No way!"**, the expression **data[1]** evaluates to

a) **'N'**
b) **'o'**

9.If **data** is the string **"No way!"**, the expression **data[-1]** evaluates to

a) **'!'**
b) **'y'**

10. If **data** is the string **"No way!"**, the expression **data[3:6]** evaluates to
a) **'way!'**
b) **'way'**
c) **'wa'**

11. If **data** is the string **"No way!"**, the expression **data.find("way!")** evaluates to

a) **2**
b) **3**
c) **True**

12. Assume that the variable **data** refers to the list **[5, 3, 7]**. Write the values of the following expressions:

a) **data[2]**

b) **data[-1]**

c) **len(data)**

d) **data[0:2]**

e) **0 in data**

f) **data + [2, 10, 5]**