

1) Determine what each of the following Python expressions will return. In other words, if these expressions were entered into the Python terminal, what would they return? (5 points each)

a.

`5/2`

`>>>2`

b.

`5./2.`

`>>>2.5`

c.

`5%3`

`>>>2`

d.

`not(5>6) and (True or False)`

`>>>>true`

e.

`(5==4) or (not True)`

`>>>>false`

2) Write the output of the following programs. (8 points each)

a.

```
for i in range(3):  
    print i*i  
    print "hi"
```

0 1 4 hi

b.

```
s=0  
for x in [5,3,1]:  
    s=s+x  
print s
```

5 8 9

c.

```
x=16  
while x > 5:  
    x=x/2  
print x
```

4

d.

```
a=7  
if a%2==1:  
    print "yoda"  
else:
```

```
print "do yoga"
```

```
yoda
```

3) The following questions are about Git. (10 points each)

a. Explain how to create a new git repository. Include all terminal commands and things you must do on github. Assume your github user name is "Charlie" and your project is in a folder named "Project" in your Documents folder. Name the repository "ProjRepo".

```
log in to github.com(as charlie)
creat a new repository and name it "projrepo"
use git terminal:
cd Documents/project
git init
git add .
git commit -m"project"
git remote add origin https://github.com/charlie/projrepo.git
git push origin master
```

b. Explain how to clone a repository name "Awesome" from github user named "Barry22". Clone the repository into your Documents folder.

```
cd documents
git clone https://github.com/barry22/awesome.git
```

4) Write a program that constructs an array filled with all of the prime numbers between 2 and 100. (20 points)

```
a=[]  
for i in range(2,100):  
    prime=True  
    for x in range(2,i):  
        if i%x==0:  
            prime=False  
    if prime:  
        a.append(i)
```