

Genome 373 9 April 2009 Python practice session

Give the values of the indicated variables after the following statements are executed.

```
a=5
if a==5:
    a=1
    b='Yes'
else:
    a=2
    b='No'
```

The value of a is:\_\_\_\_\_1\_\_\_\_\_

The value of b is:\_\_\_\_\_ 'yes' \_\_\_\_\_

```
a='ATGGGTCGAC'
if a.find('ACT') != -1:
    b='Has ATG'
else:
    b='ATG found'
```

The value of a is:\_\_\_\_\_ 'ATGGGTCGAC' \_\_\_\_\_

The value of b is:\_\_\_\_\_ 'Has ATG' \_\_\_\_\_

```
a=0
if a <= 1:
    a=a+1
elif a <= 10:
    a=a+10
else:
    a=a+100
```

The value of a is:\_\_\_\_\_1\_\_\_\_\_

```
a=10
if a <= 1:
    a=a+1
elif a <= 10:
    a=a+10
else:
    a=a+100
```

The value of a is:\_\_\_\_\_20\_\_\_\_\_

```
a=10
b=11
if a<20 and b<20:
    a=21
    if a == 21:
        b=17
```

The value of a is: 21  
The value of b is: 17

```
a=10
b=11
if a<20 and b<20:
    a=21
elif a == 21:
    b=17
```

The value of a is: 21  
The value of b is: 11

Programs:  
File I/O problem:

Write a program called `append-sums.py` that reads to integers from the command line and adds (use the `append` file option) to the end of a file called `sums.txt`. Print the addition expression to the file as well, not just the result.

For example, after the following commands:

```
python append-sums.py 5 7
python append-sums.py 41 1
```

The file `sums.txt` should contain:

```
5 + 7 = 12
41 + 1 = 42
```

Here is one solution:

```
import sys
n1 = int(sys.argv[1])
n2 = int(sys.argv[2])
outFile=open("sums.txt","a")
sum=n1+n2
s=str(n1) + " + " + str(n2)+" = "+str(sum)+"\n"
#that is one way to make the string for output
outFile.write(s)
outFile.close() #always close your files
```