

1. For each of the following functions, indicate how many times will the print statement be executed: (1.5 points each)

a.

```
def f1(A):  
    n = len(A)  
    for i in range(n):  
        print (i)  
    i = 0  
    while i < n//2:  
        print (i)  
        i = i + 1
```

b.

```
def f2(A):  
    n = len(A)  
    i = 0  
    while i < n:  
        print (i)  
        i = i + 2
```

c.

```
def f3(A):  
    n = len(A)  
    i = 1  
    while i < n:  
        print (i)  
        i = i * 2
```

d.

```
def f4(A):  
    n = len(A)  
    i = n  
    while i > 0:  
        print (i)  
        i = i // 2
```

e.

```
def f5(A):  
    n = len(A)  
    i = 100  
    j = n  
    while j >= n and i >= 0:  
        print (i,j)  
        i = i - 1  
        j = j + 1
```

2. What would be the output of the following code: (2.5 points)

```
def someSort(a):
    print (a)
    for end in range (0, len(a)):
        m = end
        for i in range(0, len(a)):
            if (a[i] < a[m]):
                m = i
        temp = a[end - 1];
        a[end - 1] = a[m];
        a[m] = temp;
    print (a)

someSort ([4,3,2,1])
```

