

1. What would be printed on the screen when the following program is executed?

a. (2 points)

```
def CT1(n):  
    for i in range(n):  
        n = n + 1  
        print (n)
```

CT1(4)

Output:

b. (2 points)

```
def CT2(a,b):  
    s = 0  
    for i in range(a,b):  
        s = s + i  
        print (s)  
        if i%4 == 0:  
            return 0  
        if i%5 == 0:  
            return 1  
    print ("Total Sum = ",s)  
    return s  
print (CT2(6,10))
```

Output:

c. (2 points)

```
def CT3():  
    A = [1,0,2]  
    B = [4,3,8,7]  
    for i in A:  
        print (B[i]- i)  
CT3()
```

Output:

2. (3 points) A fixed point in an array is an element whose value is equal to its index. Given an array `a`, return the number of fixed points, if any. If there are no fixed points, return `False`. For example, given `[0, 0, 2, 40]`, you should return 2. Given `[1, 5, 7, 8]`, you should return `False`.

```
def fixedPoints(a):  
    # Add your code here
```

3. Given the following function, give me a value for `x`, that will cause the function to return `True` (1 point)

```
def foo(x):  
    assert (10**2 < x and x < 10**3)  
    if x % 4 != 0 and x%4 != 1:  
        return True  
    return False
```

```
print (foo(_____)) # this should print True
```