**Practice Problems for Iterations - Solutions**

1. How many asterisks will the following lines of code print?

**a = 0**

**while a > 100:**

**print('\*', end='')**

**a += 1**

**print()**

**The above lines of code will print 0 asterisks. This is because execution will never enter the loop since the if condition is false to start with. This is an example of dead code.**

1. How many asterisks will the following lines of code print?

**a = 0**

**while a < 20:**

**b = 0**

**while b < 8:**

**if (a + b) % 2 == 0:**

**print('\*', end='')**

**b += 1**

**print()**

**a += 1**

**The above lines of code will print 80 asterisks split across 20 lines.**

1. What is the output?

**k = 1**

**count = 0**

**while count < 10:**

**if k % 4 == 0:**

**break**

**count = count + k**

**k = k + 1**

**print(‘count =’, count)**

**The above lines of code will print**

**count = 6**

1. Provide the exact sequence of integers specified by each of the following range expressions.
2. range(10, 5, -1)

**10,9,8,7,6**

1. range(20, 5, -3)

**20, 17, 14, 11, 8**

1. range(10, 5)

**Nothing will be generated. This is because, the start value is greater than the end value but the step value is positive.**

(d) range(0) **Nothing will be generated**

(e) range(10, 101, 10) **10,20,30,40,50,60,70,80,90,100**

1. Provide an equivalent Python range expression for each of the following integer sequences.

(a) 1,2,3,4,5 **range(1, 6)**

(b) 5,4,3,2,1 **range(5, 0, -1)**

(c) 5,10,15,20,25,30 **range(5, 31, 5)**

(d) 30,25,20,15,10,5 **range(30, 0, -5)**

1. Rewrite the following code using a *while* statement.

**for i in range(10,100,5):**

**print(i)**

**i = 10**

**while i < 100:**

**print(i)**

**i += 5**