**Section One Review Questions:**

1. A \_\_\_\_- controlled loop uses a true/false condition to control the number of times that it repeats.

b. condition

1. A \_\_\_\_- controlled loop repeats a specific number of times.

d. count

1. Each repetition of a loop is known as a(n) \_\_\_\_.

d. iteration

1. The While loop is a \_\_\_\_ type of loop.

a. pretest

1. The Do-While loop is a \_\_\_\_ type of loop.

b. prottest

1. The For loop is a \_\_\_\_ type of loop.

a. pretest

1. A(n) \_\_\_\_ loop has no way of ending and repeats until the program is interrupted.

c. infinite

1. A \_\_\_\_ loop always executes at least once.

b. posttest

1. A(n) \_\_\_\_\_ variable keeps a running total.

d. accumulator

1. A(n) \_\_\_\_ is a special value that signals when there are no more items from a list of items to be processed. This value cannot be mistaken as an item from the list.

a. sentinel

**Section Two True or False:**

1. A condition controlled loop always repeats a specific number of times.

false

1. A While loop is a pretest loop.

true

1. The Do-While loop is a pretest loop.

false

1. You should not write code that modifies the contents of the counter variable in the body of a For loop.

true

1. You cannot display the contents of the counter variable in the body of a loop.

false

1. It is not possible to increment a counter variable by any value other than 1.

false

1. The following statement decrements the variable x: set x = x – 1.

true

1. It is not necessary to initialize accumulator variable.

false

1. In a nested loop, the inner loop goes through all its iterations for every single iteration of the outer loop.

true

1. To calculate the total number of iterations of a nested loop, add the number of iterations of all the loops.

false

**Section Three Short Answer:**

1. Why should you indent the statements in the body of a loop?

By indenting the statements, you make them stand out from the surrounding code. This helps you to identify at a glance the statements that are conditionally executed by a loop.

1. Describe the difference between pretest loops and prottest loops?

Pretest loop tests its condition before performing an iteration, while a prottest loop performs it after.

1. What is a condition-controlled loop?

This means that the loop will continue to loop until some condition is met.

1. What is a count-controlled loop?

A count-controlled loops iterates a specific number of times

1. What three actions do count-controlled loops typically perform using the counter variables?

The three actions count-controlled loops typically perform are increment, initialization and test.

1. What is an infinite loop? Write the code for an infinite loop.

An infinite loop is when someone forgets to write the false test condition so the program keeps going until it is interrupted.

While keepGoing == “y”

Display “Enter the amount of sales.”

Input sales

Set commissions = sales \* COMMISSION\_RATE

Display “The commission is $”, commission

End While

1. For loops also look like if statements in flowchart form.

For loops also look like pretest loops in flowchart form.

1. Why is it critical that accumulator variables are properly initialized?

So, that you can keep your running total.

1. What is the advantage of using a sentinel?

There is no limit to the amount of times it can execute.

1. Why must the value have chosen for use as a sentinel by carefully selected?

So, that the value of the sentinel is not mistaken for a regular value in your list.