**1) What is a compound assignment operator? How does it work?**

-A compound assignment operator is a combination of regular mathematical operators that are used to modify the value of an existing variable. They are used to simplify the coding of expressions. They work with the same precedence and associativity as the simple assignment operator. For example, instead of stating that a variable is equal to itself plus a number, you can state that the variable is += to a number.

**2) List all the compound assignment operators.**

-The 5 compound assignment operators are \*=, /=, %=, +=, and -=.

**3) List two ways to increment a numeric variable by 5. List two ways to decrement a numeric variable by 50.**

-Two ways to increment a numeric value by 5 are: value = value + 5, and value += 5. Two ways to decrement a numeric value by 50 are: value = value – 50, and value -= 50.

**4) How long does a while loop run?**

-A “while” loop will continue to run until the Boolean condition that started the loop returns false.

**5) What happens if you don’t change the loop variable in the body of the while loop block?**

-If you don’t change the loop variable in the body of the “while” loop block, the loop will continue to run indefinitely.

**6) How many parts does a for loop statement have? How many of them are required?**

-A “for” loop statement has three parts: the initialization, a Boolean expression, and an update control. Being technical, the body of the “for” loop is a part of the loop as well. Since none of the controls are mandatory, the only part that would be considered mandatory would be the body.

**7) What happens if you omit parts of the for loop from the previous question? How about all of them?**

-When you omit the Boolean expression, the condition defaults to “true” and the statement will run forever. If you omit the initialization and update parts, the loop becomes a poorly worded “while” loop.

**8) How do you guarantee that a loop runs at least once?**

-You can guarantee that a loop runs at least once by using a “do-while” loop because the body of the loop is executed first and the condition is evaluated at the end.

**9) What does the break statement do?**

-The “break” statement is used to jump out of the body of an iteration statement so that control can be passed to the statement that follows the terminated statement, if any.

**10) What does the continue statement do?**

-The “continue” statement passes control to the next iteration of the enclosing “while”, “do”, “for”, or “for each” statement.