Answer the discussion questions in writing.

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

The compound assignment operator combines arithmetic operators with the assignment operator. For example, rather than writing:

variable = variable + number

With the compound assignment operator, you can write

variable += number

1. List all the compound assignment operators.

\*=  
/=  
%=  
+=  
-=

1. List two ways to increment a numeric variable by 5. List two ways to decrement a numeric variable by 50.

variable = variable + 5  
variable += 5

variable = variable - 50  
variable -= 50

1. How long does a while loop run?

A while loop will run for as long as some condition is true.

1. What happens if you don’t change the loop variable in the body of the while loop block?

The statement does not terminate and the program might run forever.

1. How many parts does a for loop statement have? Can you omit any of them? Can you omit all of them?

The for loop has three parts: initialization, Boolean expression, update control variable.  
You can omit any of the three parts of a for statement. If you omit the Boolean statement, the program will run forever.

1. What happens if you omit all of them?

If you omit all of the parts from the parenthesis but still have them located elsewhere in the statement, then you have created a strangely spelled while loop. For example, the following code omits all of them, and since it is also missing the Boolean statement, it will run forever:

int i = 0;

for (; ; )

{

Console.WriteLine("somebody stop me!");

i++;

}

1. How do you guarantee that a loop runs at least once?

Use a Do / While statement.

1. What does the break statement do?

The break statement jumps out of a switch statement or the body of an iteration statement. When you break out of a loop, the loop exits immediately, and execution continues at the first statement that follows the loop.

1. What does the continue statement do?

The continue statement causes the program to perform the next iteration of the loop immediately (after reevaluating the Boolean expression).