**Q1**. Determine the values of variables product and x after the following calculation is performed. Assume that product and x each have the value 5 when the statement begins executing.

```
product *= x++;
```

**Q2**. Write a single C statement to accomplish each of the following:
a) Assign the sum of x and y to z and increment the value of x by 1 after the calculation.
b) Multiply the variable product by 2 using the *= operator.
c) Multiply the variable product by 2 using the = and * operators.
d) Test if the value of the variable count is greater than 10. If it is, print "Count is greater than 10."
e) Decrement the variable x by 1, then subtract it from the variable total.
f) Add the variable x to the variable total, then decrement x by 1.
g) Calculate the remainder after q is divided by divisor and assign the result to q. Write this statement two different ways.
h) Print the value 123.4567 with 2 digits of precision. What value is printed?
i) Print the floating-point value 3.14159 with three digits to the right of the decimal point. What value is printed?

**Q3**. Identify and correct the errors in each of the following. [*Note:* There may be more than one error in each piece of code.]

a)
```
if ( age >= 65 );
   printf( "Age is greater than or equal to 65\n" );
else
   printf( "Age is less than 65\n" );
```

b)
```
int x = 1, total;
while ( x <= 10 ) {
   total += x;
   ++x;
}
```

c)
```
While ( x <= 100 )
   total += x;
   ++x;
```

d)
```
while ( y > 0 ) {
   printf( "%d\n", y );
   ++y;
}
```

**Q4**. ***(Credit Limit Calculator)*** Develop a C program that will determine if a department store customer has exceeded the credit limit on a charge account. For each customer, the following facts are available:
a) Account number
b) Balance at the beginning of the month
c) Total of all items charged by this customer this month
d) Total of all credits applied to this customer's account this month
e) Allowed credit limit

The program should input each of these facts, calculate the new balance (= *beginning balance* + *charges* – *credits*), and determine if the new balance exceeds the customer's credit limit. For those customers whose credit limit is exceeded, the program should display the customer's account number, credit limit, new balance and the message “Credit limit exceeded.” Here is a sample input/output dialog:

Enter account number (-1 to end): 100
Enter beginning balance: 5394.78
Enter total charges: 1000.00
Enter total credits: 500.00
Enter credit limit: 5500.00
Account: 100
Credit limit: 5500.00
Balance: 5894.78
Credit Limit Exceeded.
Enter account number (-1 to end): 200
Enter beginning balance: 1000.00
Enter total charges: 123.45
Enter total credits: 321.00
Enter credit limit: 1500.00
Enter account number (-1 to end): 300
Enter beginning balance: 500.00
Enter total charges: 274.73
Enter total credits: 100.00
Enter credit limit: 800.00
Enter account number (-1 to end): -1

**Q5**. Write a program that takes 10 integers from the user and prints out the largest two integers entered by the user.