Tutorial #5: Nested selection/Switch

Question 1:

Write a multi-way if-else statement that evaluates a person's weight on the following criteria:

- A weight less than 116 pounds, output: Eat 5 banana splits!
- A weight between 116 pounds and 130 pounds, output: Eat a banana split!
- A weight between 131 pounds and 200 pounds, output: Perfect!
- A weight greater than 200 pounds, output: Plenty of banana splits have been consumed!

Question 2:

Write an if-else statement to compute the amount of shipping due on an online sale. If the cost of the purchase is less than or equal to $20, the shipping cost is $5.99. If the cost of the purchase over $20 and at most $65, the shipping cost is $10.99. If the cost of the purchase is over $65, the shipping cost is $15.99.

Question 3: Console Input/Output

Assume the following fragment of code:

```
Scanner myKeyboard = new Scanner(System.in);
String msg = myKeyboard.next();

int x = 0; int y = 10; int z = 100;

switch(msg.charAt(0))
{
   case 'a':
   case 'b': System.out.println("case 1");
        x = (msg.equals("abc") ? (5 + y++) : (--y + z--));
        break;
   case 'c': System.out.println("case 2");
        y /= 5; default:
        System.out.println("default");
}
System.out.println(x + " " + y + " " + z);
```

a) What is the output if the user enters the string: `abc`

b) What is the output if the user enters the string: `Abc`

c) What is the output if the user enters the string: `ccc`

Question 4:

Assume the following fragment of code:

```
int age;
double rebate = 0;
boolean isAStudent;
int workExperience;

…

if (age < 10)
   rebate = 20;
if (age > 70)
    rebate = 20;
if (age < 20)
   if (isAStudent)
      if (workExperience > 4)
         rebate = 15;
```

Rewrite the instructions outlined in grey by reducing the number of `if` statements **to a minimum**.

Your new code should behave exactly as the above code in every possible situation.