1. Select the best answer for the following questions.

   (a) (1 point) Which of the following could be a valid method header for a method named calculate?
   
   A. public static calculate(int z)
   B. public static void calculate(int, int)
   C. public static int calculate
   D. public static void calculate(int a)
   E. public static String, int calculate(int i)

   (b) (1 point) Which of the following return statements could complete the method below?
   public static int convert(int i, String s) {
       //return statement here
   }
   
   A. return;
   B. return i+6;
   C. return i/2.0;
   D. return s;
   E. return i, s;

2. (4 points) Evaluate the following boolean expressions given the variables below. If the expression would generate an error, you may simply write “error” for the result.

   int x = 6;
   int y = 4;

<table>
<thead>
<tr>
<th>Expression</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>x &gt; y</td>
<td>true</td>
</tr>
<tr>
<td>x != y+2</td>
<td>false</td>
</tr>
<tr>
<td>x &gt; y &gt; 2</td>
<td>error</td>
</tr>
<tr>
<td>x-2 == y+2</td>
<td>false</td>
</tr>
</tbody>
</table>
3. Consider the following method:

```java
public static void calculate(int a, int b) {
    int z = 0;
    if (a >= 90) {
        if (b >= 20)
            z = 1;
        else
            z = 2;
        z = 3;
    } else if (a >= 80) {
        z = 4;
    } else {
        z = 5;
    }
    System.out.println("z is " + z);
}
```

(a) (1 point) What does the method print if the method is invoked with the call `calculate(88, 25)`?

**Solution:** z is 4

(b) (1 point) What does the method print it is invoked with the call `calculate(14, 0)`?

**Solution:** z is 5

(c) (1 point) What does the method print if it is invoked with the call `calculate(95, 25)`?

**Solution:** z is 3

4. Consider the following method:

```java
public static void mystery(int z, int y, int x) {
    System.out.println("x is " + x + ", y is " + y + " and z is " + z);
}
```

(a) (3 points) What is the output given the following variables and method call?

```java
int x = 6;
int y = 9;
int z = 14;
mystery(y, z, x);
```

**Solution:** x is 6, y is 14 and z is 9
(b) (3 points) Using values, write a call to the mystery method which would generate the output:

\[ x \text{ is 8, } y \text{ is 1 and } z \text{ is 4} \]

**Solution:** mystery(4,1,8)