

IF ELSE EXERCISES:

Question 1:

Consider the following method.

```
public static void ifElseMystery(int a, int b) {
    int c = 2;
    if (a + c < b) {
        c = c + 8;
    } else {
        b = b + 10;
    }
    if (a + c < b) {
        c = c + 8;
    } else {
        b = b + 10;
    }
    System.out.println(b + " " + c);
}
```

For each call below, indicate what output is produced.

Method Call	Output
<code>ifElseMystery(4, 15);</code>	
<code>ifElseMystery(7, 17);</code>	
<code>ifElseMystery(12, 5);</code>	
<code>ifElseMystery(16, 8);</code>	

Question 2:

```
public static void ifElseMystery(int a, int b) {
    if (a < b) {
        a = a + 2;
        b = b - 3;
    } else if (a == b) {
        a = a * 2;
        b = b + 5;
    } else {
        a = a - 3;
    }
    if (a == b) {
        b = b + 10;
    }
    System.out.println(a + " " + b);
}
```

For each call below, indicate what output is produced.

Expressions	Value
<code>ifElseMystery(2, 5);</code>	
<code>ifElseMystery(5, 5);</code>	
<code>ifElseMystery(6, 3);</code>	
<code>ifElseMystery(4, 4);</code>	
<code>ifElseMystery(3, 8);</code>	
<code>ifElseMystery(9, 5);</code>	

Question 3:

```
public static void ifElseMystery(int a, int b) {
    if (a < b) {
        a++;
    }
    if (a < b) {
        a++;
    } else {
        b++;
    }
    if (a >= b) {
        b = b - 5;
    }
    System.out.println(a + " " + b);
}
```

For each call below, indicate what output is produced.

Method Call	Output
<code>ifElseMystery(1, 8);</code>	
<code>ifElseMystery(3, 5);</code>	
<code>ifElseMystery(4, 5);</code>	
<code>ifElseMystery(8, 6);</code>	

Question 4:

If/Else Simulation

Consider the following method.

```
public static void ifElseMystery(int a, int b) {
    if (a == b) {
        b--;
    } else if (a < b) {
        a++;
    } else {
        b = b + 5;
    }
    if (a == b) {
        a = a + 2;
    }
    System.out.println(a + " " + b);
}
```

For each call below, indicate what output is produced.

Method Call	Output
<code>ifElseMystery(14, 14);</code>	
<code>ifElseMystery(4, 5);</code>	
<code>ifElseMystery(10, 5);</code>	
<code>ifElseMystery(2, 8);</code>	

Question 5:

If/Else Simulation

For each call below to the following method, write the output that is produced, as it would appear on the console:

```
public static void ifElseMystery(int a, int b) {  
    if (a < b) {  
        a = a * 2;  
    }  
    if (a > b) {  
        a = a - 10;  
    } else {  
        b++;  
    }  
    System.out.println(a + " " + b);  
}
```

Method Call	Output
<code>ifElseMystery(10, 3);</code>	
<code>ifElseMystery(6, 6);</code>	
<code>ifElseMystery(3, 4);</code>	
<code>ifElseMystery(4, 20);</code>	

Question 6:

```
public static void ifElseMystery(int a, int b, int c) {  
    if (a < b && a < c) {  
        a = a + c;  
        c++;  
    } else if (a >= b) {  
        a = a - b;  
        b--;  
    }  
  
    if (a >= b && a >= c) {  
        a++;  
        c++;  
    }  
  
    System.out.println(a + " " + b + " " + c);  
}
```

Method Call	Output
<code>ifElseMystery(2, 10, 3);</code>	
<code>ifElseMystery(8, 6, 1);</code>	
<code>ifElseMystery(4, 6, 7);</code>	
<code>ifElseMystery(20, 5, 5);</code>	