1. Assuming that x is 1, show the results of the following Boolean expressions.
   a. (false) && (3 > 4)
   b. (x > 0) && (x > 0)
   c. (x < 0) || (x > 0)
   d. (x != 0) || (x == 0)
   e. (x >= 0) || (x < 0)
   f. !(x != 1) == !(x == 1)

2. Suppose that x is 2. What is x after the evaluation of the following expression?
   a. (x >= 2) && (x++ > 2)

3. Suppose that x is 2. What is x after the evaluation of the following expression?
   a. (x > 2) && (x++ > 2)

4. Show the output of the following program:
   ```java
   public class Test {
       public static void main(String[] args) {
           char x = 'b';
           char y = 'd';

           System.out.println(++y);
           System.out.println(y++);
           System.out.println(x > y);
           System.out.println(x - y);
       }
   }
   ```

5. Suppose x = 2 and y = 3. Show the output, if any, of the following code. What is the output if x = 3 and y = 2? What is the output if x = 3 and y = 3? (Hint: Indent the statement correctly first.)
   ```java
   if (x > 2)
       if (y > 2) {
           int z = x + y;
           System.out.println("z is " + z);
       }
   else
       System.out.println("x is " + x);
   ```

6. Write an if statement that increases pay by 4% if score is greater than 85, otherwise increases pay by 2%.
7. Show the output of the following statements.
   a. `System.out.printf("amount is %f %e\n", 32.32, 32.32);`
   b. `System.out.printf("amount is %5.4f %5.4e\n", 32.32, 32.32);`
   c. `System.out.printf("%b\n", (1 > 2));`
   d. `System.out.printf("%6s\n", "Java");`
   e. `System.out.printf("%-6b%s\n", (1 > 2), "Java");`
   f. `System.out.printf("%6b%-s\n", (1 > 2), "Java");`

8. Evaluate the following expressions:
   a. `2 * 2 - 3 > 2 && 4 - 2 > 5`
   b. `2 * 2 - 3 > 2 || 4 - 2 > 5`