1. **(10 Points)** What is the output of the following:

```java
int a = 5, b = a/2, c = a % 2;
float d = (float) (a/2.0);
System.out.println("a = " + a + " - " + "b = " + b + " - " +
                    "c = " + c + " - " + "d = " + d);
a = b;
b = c;
d = (float) (a*c/b);
System.out.println("a = " + a + " - " + "b = " + b + " - " +
                    "c = " + c + " - " + "d = " + d);
```

2. **(10 Points)** What is the output of the following:

```java
for ( int i = 1 ; i <= 13 ; i += 3 ) {
    System.out.print(i + " : " + i * 2 + " : " + i * 3 + " - ");
}
System.out.println();
System.out.println("No More!");
```

3. **(10 Points)** What is the output of the following:

```java
for ( int i = 0 ; i <= 3 ; i++) {
    for ( int j = 0 ; i <= 3 ; j++) {
        if (i == j) {
            continue;
        } else if (i <= j) {
            break;
        }
    System.out.println("i = " + i + " : " + "j = " + j);
}
}
```

4. **(10 Points)** What is the output of the following:

```java
for ( int i = 5; i >= 0; i-- ) {
    switch (i) {
        case 1:
            System.out.println(i + ":" + i*2);
        case 2:
            System.out.println(i + ":" + i*3);
            break;
        case 3:
            System.out.println(i + ":" + i*4);
        case 4:
            System.out.println(i + ":" + i*5);
            break;
        default:
            System.out.println(i + ":" + i*8);
            break;
    }
}
```
5. **(20 Points)** Write Java code to do the following (not the entire program):
   a. Add the even numbers from 2012 to 22012 inclusive and display the result.
   b. Print the multiples of 8 from 8 to 1048568 inclusive.

6. **(30 Points)** Write a complete Java program that prompts the user for a number of video games bought in a store. Your program should then use a loop that asks for the price & quantity video game and print out a running total of the video games (that is, after asking for each price & quantity, print out the amount spent so far).

7. **(10 Points)** The aim of the following program is to convert distances between miles and kilometers. Find all the errors in the program. (Hint: There are 10 errors).

```java
import java.util.Scanner;

public class ConvertDistance {
    public static void main(String[] args) {
        double m;

        Scanner keyboard = new Scanner(System.in);

        System.out.println("To convert from miles to kilometers:");
        System.out.println("Enter a distance followed by 'M' or 'm'");
        System.out.println("or ");
        System.out.println("To convert from kilometers to miles:");
        System.out.println("Enter a distance followed by 'K' or 'k'");

        String userInput = new String(keyboard.nextLine());
        userInput = userInput.toLowerCase();
        userInput = userInput.replaceAll(" ", "");

        if (userInput.indexOf("m") != -1) {
            userInput = userInput.replaceAll("k", "");
            m = Double.parseDouble(userInput);
            k = (m * 1.6);
            System.out.println(m + " miles is equal to " + k + " kilometers");
        } else if (userInput.indexOf("k") != -1) {
            userInput = userInput.replaceAll("m", "");
            k = Double.parseDouble(userInput);
            m = (k/1.6)
            System.out.println(k + " kilometers is equal to " + m + " miles");
        } else {
            System.out.println("Invalid input");
            System.exit(-1);
        } // end of if

        System.exit(0);
    }
}
```