

Task 1 code:

```
public class Task1 {
    public static void main(String[] args) {
        int number = 0; // Number to print

        for (int row = 0; row <= 7; row++) {
            // Pad leading blanks
            for (int col = 1; col <= 7 - row; col++)
                System.out.printf("%4s", " ");

            // Print left half of the row
            for (int col = 0; col <= row; col++) {
                number = (int)Math.pow(2, col);

                System.out.printf("%4d", number);
            }

            // Print the right half of the row
            for (int col = row - 1; col >= 0; col--) {
                number = (int)Math.pow(2, col);

                System.out.printf("%4d", number);
            }

            // Start a new line
            System.out.print("\n");
        }
    }
}
```

Task 2 code:

```
import java.util.Scanner;

public class Task2 {
    public static void main(String args[]) {
        Scanner input = new Scanner(System.in);

        System.out.print("Enter circle1's center x-, y-coordinates, and radius: ");
        double x1 = input.nextDouble();
        double y1 = input.nextDouble();
        double r1 = input.nextDouble();

        System.out.print("Enter circle2's center x-, y-coordinates, and radius: ");
        double x2 = input.nextDouble();
        double y2 = input.nextDouble();
        double r2 = input.nextDouble();

        double distance = Math.pow((x1 - x2) * (x1 - x2) +
            (y1 - y2) * (y1 - y2), 0.5);
        if (distance + r2 <= r1)
            System.out.println("circle2 is inside circle1");
        else if (distance <= r1 + r2)
            System.out.println("circle2 overlaps circle1");
        else
            System.out.println("circle2 does not overlap circle1");
    }
}
```

Task 3 code:

```
public class Task3 {
    public static void main(String[] args) {
        java.util.Scanner input = new java.util.Scanner(System.in);

        // Enter values for list1
        System.out.print("Enter list1: ");
        int size1 = input.nextInt();
        int[] list1 = new int[size1];

        for (int i = 0; i < list1.length; i++)
            list1[i] = input.nextInt();

        // Enter values for list2
        System.out.print("Enter list2: ");
        int size2 = input.nextInt();
        int[] list2 = new int[size2];

        for (int i = 0; i < list2.length; i++)
            list2[i] = input.nextInt();

        if (equals(list1, list2)) {
            System.out.println("Two lists are identical");
        }
        else {
            System.out.println("Two lists are not identical");
        }
    }

    public static boolean equals(int[] list1, int[] list2) {
        // Hint: (1) first check if the two have the same size.
        // (2) Sort list1 and list2 using the sort method.
        // (3) Compare the corresponding elements from list1 and list2.
        // return false, if not match. Return true if all matches.

        if (list1.length != list2.length)
            return false;

        java.util.Arrays.sort(list1);
        java.util.Arrays.sort(list2);
        for (int i = 0; i < list1.length; i++)
            if (list1[i] != list2[i])
                return false;

        return true;
    }

    public static boolean equalsAlterntive(int[] list1, int[] list2) {

        java.util.Arrays.sort(list1);
        java.util.Arrays.sort(list2);

        return java.util.Arrays.equals(list1, list2);
    }
}
```