```
Circle{radius=5.0, area=78.5, circumference=31
  .400000000000002, diameter=10.0, perimeter=31
  .400000000000002}
Radius of circle2: 0.0
Circle{radius=0.0, area=0.0, circumference=0.0,
  diameter=0.0, perimeter=0.0}
Area: 0.0
Circle{radius=0.0, area=0.0, circumference=0.0,
  diameter=0.0, perimeter=0.0}
Circle{radius=2.0, area=5.0, circumference=12.56,
  diameter=4.0, perimeter=12.56}
Area: 5.0
Circle{radius=2.0, area=5.0, circumference=12.56,
  diameter=4.0, perimeter=12.56}
```

```java
package Lab5;

public class CircleDemo {

    public static void main(String[] args) {
        Circle circle1 = new Circle( radius: 5);
        Circle circle2 = new Circle();
        Lab5.other.Circle circle3 = new Lab5.other.Circle( radius: 2,  area: 5);

        circle1.printAll();
        circle1.calculateArea();
        circle1.calculateCircumference();

        System.out.println("Radius of circle2: " + circle2.getRadius());
        circle2.printAll();
        circle2.calculateArea();
        circle2.printArea();
        circle2.calculateCircumference();
        circle2.printAll();

        circle3.printAll();
        circle3.calculateArea();
        circle3.printArea();
        circle3.calculateCircumference();
        circle3.printAll();
    }
}
```

```java
public class Circle {

    private double radius;
    private static final double PI = 3.14;
    private double area;
    private double circumference;
    private double diameter;

    public Circle() { this( radius: 0); }

    public Circle(double radius) {
        this.radius = radius;
        this.area = calculateArea();
        this.circumference = calculateCircumference();
        this.diameter = 2 * radius;
    }

    public Circle(double radius, double area) {
        this.radius = radius;
        this.area = area;
        this.circumference = calculateCircumference();
        this.diameter = 2 * radius;
    }

    public double calculateArea() { return PI * radius *radius; }

    public double calculatePerimeter() { return PI * 2 * radius; }

    public double calculateCircumference() { return 2 * PI * radius; }

    public double getRadius() { return radius; }

    public double getArea() { return area; }

    public double getCircumference() { return circumference; }

    public double getDiameter() { return diameter; }

    public void setRadius(double radius) {
        this.radius = radius;
        this.area = calculateArea();
        this.circumference = calculateCircumference();
        this.diameter = 2 * radius;
    }

    public void setArea(double area) { this.area = area; }

    public void setCircumference(double circumference) { this.circumference = circumference; }

    public void setDiameter(double diameter) { this.diameter = diameter; }

    public void printRadius() { System.out.println("Radius: " + this.radius); }

    public void printArea() { System.out.println("Area: " + this.area); }

    public void printCircumference() { System.out.println("Circumference: " + this.circumference); }

    public void printDiameter() { System.out.println("Diameter: "); }

    public void printAll() { System.out.println(this); }

    @Override
    public String toString() {
        return "Circle{" +
                "radius=" + radius +
                ", area=" + area +
                ", circumference=" + circumference +
                ", diameter=" + diameter +
                ", perimeter=" + this.calculatePerimeter() +
                '}';
    }
}
```