

Circle.java

```
1 import java.lang.Object;
2
3
4 public class Circle extends Oval{
5     public Circle()
6     {
7         this(1);
8     }
9
10    public Circle(double radius)
11    {
12        this(0,0,Color.black,radius);
13    }
14
15    public Circle(int x, int y, Color color, double radius)
16    {
17        super(x,y,(int)radius*2,(int)radius*2,color);
18        this.radius = radius;
19    }
20
21    public double getArea()
22    {
23        return Math.PI*radius*radius;
24    }
25
26    public double getPerimeter()
27    {
28        return Math.PI*(2*radius);
29    }
30
31    public double getRadius()
32    {
33        return radius;
34    }
35
36    public String toString()
37    {
38        return "(" + radius + ", " + getPerimeter() + ", " + getArea() + ")";
39    }
40
41    public void draw(Graphics g)
42    {
43        g.setColor(this.getColor());
44        g.fillOval((int)(this.getX()-radius/2), (int)(this.getY()-radius/2), (int)radius,
45        (int)radius);
46    }
47    private double radius;
48 }
49
```