

Oval.java

```
1 import java.awt.Color;
2
3
4 public class Oval extends Shape
5 {
6     private int width;
7     private int height;
8
9
10    public Oval() {
11        super();
12    }
13
14    public Oval(int width, int height) {
15        super();
16        this.width = width;
17        this.height = height;
18    }
19
20
21    public void setWidth(int width) {
22        this.width = width;
23    }
24
25    public void setHeight(int width) {
26        this.width = width;
27    }
28    public int getWidth() {return this.width;}
29    public int getHeight() {return this.height;}
30
31    @Override
32    public double getArea()
33    {    return (width/2)*(height/2)*Math.PI; }
34
35    @Override
36    public double getPerimeter()
37    {    return 2*Math.PI*(Math.sqrt((width*width + height*height )/
38        2));}
39
40    @Override
41    public int[] getBoundingBox()
42    {
```

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```
42     int x1 = getX();
43     int y1 = getY();
44     int x2 = x1 + (width);
45     int y2 = y1 + (height);
46     int[] box = {x1,x2,y1,y2};
47
48     return box;
49 }
50
51 @Override
52 public void draw(Graphics g)
53 {
54     g.setColor(getColor());
55     g.fillOval(getX(), getY(), getWidth(), getHeight());
56
57 }
58
59
60
61
62 }
63
```