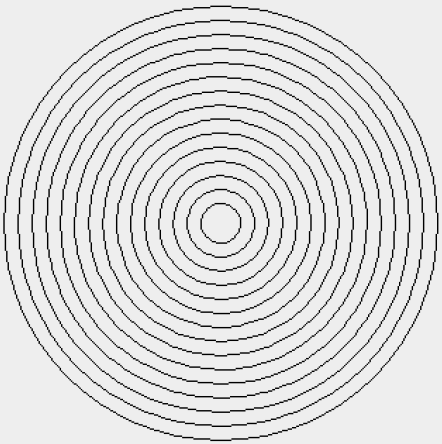Chapter 4, #17 – ConcentricCircles:

```
import java.awt.*;
import java.awt.geom.*;
import com.programwithjava.basic.DrawingKit;

public class ConcentricCircles {
        public static void main(String[] args) {
                DrawingKit dk = new DrawingKit("Concentric Circles");
                float R = 154, innerCircle = 20, x = R, y = R;
                float step = 10;
                float innermostCircleDiameter = R;
                int circles_counter = 0;

                while (R*2 >= innerCircle) {
                        // draw a circle with diameter 2*(R–10)
                        Ellipse2D.Float circle = new Ellipse2D.Float(x, y, 2 * R, 2 * R);
                        dk.setPaint(Color.black);
                        dk.draw(circle);
                        circles_counter++; // count how many circles with diameter <= 20 is drawn
                        innermostCircleDiameter = 2 * R; // the innermost diameter >= 20 is drawn
                        x += step;
                        y += step;
                        R -= step;
                }
                System.out.println(circles_counter);
                System.out.println(innermostCircleDiameter);
        }
}
```