**Create an abstract class Shape with a constructor that initializes the shape's dimensions (like radius for a circle). Create a subclass Circle that extends Shape and calculates the area.**

abstract class Shape {

double dimension;

Shape(double dimension) {

this.dimension = dimension;

}

abstract double area();

}

class Circle extends Shape {

Circle(double radius) {

super(radius);

}

double area() {

return Math.PI \* dimension \* dimension;

}

}

public class ShapeTest {

public static void main(String[] args) {

Circle circle = new Circle(5);

System.out.println("Area of the circle: " + circle.area());

}

}