```
Shape
import java.util.Scanner;
abstract class Shape {
  int dimension1;
  int dimension2
  abstract void printArea();
}
class Rectangle extends Shape {
  public Rectangle(int length, int width) {
    this.dimension1 = length;
    this.dimension2 = width;
  }
  void printArea() {
    int area = dimension1 * dimension2;
    System.out.println("Rectangle Area: " + area);
  }
}
class Triangle extends Shape {
  public Triangle(int base, int height) {
    this.dimension1 = base;
    this.dimension2 = height;
  }
  void printArea() {
    double area = 0.5 * dimension1 * dimension2;
    System.out.println("Triangle Area: " + area);
  }
}
class Circle extends Shape {
  private final double pi = 3.14159;
  public Circle(int radius) {
    this.dimension1 = radius;
```

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this.dimension2 = 0;
  }
  void printArea() {
    double area = pi * dimension1 * dimension1;
    System.out.println("Circle Area: " + area);
  }
}
public class Main {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    System.out.print("Enter length of rectangle: ");
    int length = scanner.nextInt();
    System.out.print("Enter width of rectangle: ");
    int width = scanner.nextInt();
    Rectangle rectangle = new Rectangle(length, width);
    rectangle.printArea();
    System.out.print("Enter base of triangle: ");
    int base = scanner.nextInt();
    System.out.print("Enter height of triangle: ");
    int height = scanner.nextInt();
    Triangle triangle = new Triangle(base, height);
    triangle.printArea();
    System.out.print("Enter radius of circle: ");
    int radius = scanner.nextInt();
    Circle circle = new Circle(radius);
    circle.printArea();
    scanner.close();
  }}
```

Microsoft Windows [Version 10.0.22631.4317] (c) Microsoft Corporation. All rights reserved.

C:\Users\Admin\Documents\23cs310>javac Main.java

C:\Users\Admin\Documents\23cs310>java Main Enter length of rectangle: 5 Enter width of rectangle: 3

Rectangle Area: 15

Enter base of triangle: 4 Enter height of triangle: 6

Triangle Area: 12.0 Enter radius of circle: 7 Circle Area: 153.93791

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