import java.util.Scanner;

abstract class Shape {

protected int dimension1;

protected int dimension2;

abstract void printArea();

}

class Rectangle extends Shape {

public Rectangle(int width, int height) {

this.dimension1 = width;

this.dimension2 = height;

}

@Override

void printArea() {

int area = dimension1 \* dimension2; // Area = width \* height

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

}

}

class Triangle extends Shape {

public Triangle(int base, int height) {

this.dimension1 = base;

this.dimension2 = height;

}

@Override

void printArea() {

double area = 0.5 \* dimension1 \* dimension2;

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

}

}

class Circle extends Shape {

public Circle(int radius) {

this.dimension1 = radius; // Radius }

@Override

void printArea() {

double area = Math.PI \* dimension1 \* dimension1;

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

}

}

public class ShapeDemo {

public static void main(String[] args) {

System.out.println("enter the dimensions of the rectangle:(length and breadth):");

Scanner sc = new Scanner(System.in);

int l1=sc.nextInt();

int b1=sc.nextInt();

Shape rectangle = new Rectangle(l1, b1);

rectangle.printArea();

System.out.println("enter the dimensions of the traingle:(base and height):");

int b2 = sc.nextInt();

int h1=sc.nextInt();

Shape triangle = new Triangle(b2, h1);

triangle.printArea();

System.out.println("enter the dimensions of the circle:(radius):");

int r1=sc.nextInt();

Shape circle = new Circle(r1);

circle.printArea();

}

}