Week 4

import java.util.Scanner;  
  
class InputScanner {  
    Scanner scanner = new Scanner(System.in);  
     
    int getInt() {  
        return scanner.nextInt();  
    }  
}  
  
abstract class Shape extends InputScanner {  
    int dimension1;  
    int dimension2;  
  
    abstract void printArea();  
}  
  
class Rectangle extends Shape {  
    Rectangle() {  
        System.out.print("Enter length of Rectangle: ");  
        dimension1 = getInt();  
        System.out.print("Enter width of Rectangle: ");  
        dimension2 = getInt();  
    }  
  
    void printArea() {  
        double area = dimension1 \* dimension2;  
        System.out.println("Area of Rectangle: " + area);  
    }  
}  
  
class Triangle extends Shape {  
    Triangle() {  
        System.out.print("Enter base of Triangle: ");  
        dimension1 = getInt();  
        System.out.print("Enter height of Triangle: ");  
        dimension2 = getInt();  
    }  
  
    void printArea() {  
        double area = 0.5 \* dimension1 \* dimension2;  
        System.out.println("Area of Triangle: " + area);  
    }  
}  
  
class Circle extends Shape {  
    Circle() {  
        System.out.print("Enter radius of Circle: ");  
        dimension1 = getInt();  
        dimension2 = 0;  
    }  
  
    void printArea() {  
        double area = Math.PI \* dimension1 \* dimension1;  
        System.out.println("Area of Circle: " + area);  
    }  
}  
  
public class Area {  
    public static void main(String[] args) {  
        Shape rectangle = new Rectangle();  
        Shape triangle = new Triangle();  
        Shape circle = new Circle();  
  
        rectangle.printArea();  
        triangle.printArea();  
        circle.printArea();

        System.out.println("Ruqaiyya Mahreen 1BM23EE044");  
    }  
}

