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;
   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();
```

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scanner.close();
}
```

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PROGRAM 4	double area = 0.5 + dimension + dimension 2.
Develop a Java program to create an abstract class hamed	S.D.P ("Triangle Area:" Large);
Shape that contains two integers and an empty method name	3
Print Areal) Provide three classes named Rectangle, Triangle Lircle	
such that each one of the classes exends the class shape: Lacu one of the classes coulain only the method printmak	hard to be a few and the second of the secon
Each give of the classes contain only the method promise	class Circle Crends Shape 1 a man and .
that prink the area of a given shape.	private final double pi = 3-14 159;
a b. Course a street beat stored	produce produce president
import java-util-scanner;	public Circle (int radius) ?
Paragraphy Patriol addition	this dimension = radius;
abstract class shape f	His dimension ? O;
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	Vaid pinkling (28
abstract void print (real);	Void point trea()?
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class Rectangle extends Shape 9	2
public Rectangle (int length, int width) f	3
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Void print/rea()?	Scanner Scanner = New Scanner Csylle
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2	S-O-P ("Enter width of rectangle:"
() Jung-strace (Alfa-cestus	int width = scanner nextlut();
	Rectangle rectangle > new Rectangle (1
Class Triangle exkuds Shape &	The state of the s
public Triangle (int base, int height)?	rectangle printdrea();
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int base = same intertact");
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int base = same intertact (1);
Triangle brought = same triangle (base, beight);
brownele proteste coding of circles");
int radius = same restellate();
Circle siccle = now (rice (radius));
Circle trate ();

3

Output

Caster lengthe of rectangle = 5
Custer midtle of rectangle = 3
Rectangle brea = 15
Custer base of principle = 47
Custer base of principle = 6

Triangle brea = 153 - 93304