

# LAB 4:

Date

02/10/24

Page

```
import java.util.Scanner;
class InputScanner
{
```

```
    Scanner s = new Scanner(System.in);
    double getInput (String prompt) {
        System.out.println(prompt);
        return s.nextDouble();
    }
```

```
}
abstract class Shape extends InputScanner {
    double side1, side2;
    abstract void area();
}
```

```
class Rectangle extends Shape {
    Rectangle () {
```

```
        side1 = getInput("Enter length of rectangle: ");
        side2 = getInput("Enter breadth of rectangle: ");
    }
```

```
    void area()
    {
```

```
        double area = side1 * side2;
        System.out.println("Area of rectangle = " + area);
    }
```

```
}
```

```
class Triangle extends Shape {
    Triangle () {
```

```
        side1 = getInput("Enter base of the triangle: ");
        side2 = getInput("Enter height of the triangle: ");
    }
```

```
}
```

```
void area ()
```

```
{
```

```
double, area = side1 * side2 / 2;
```

```
System.out.println("Area of the Triangle = " + area);
```

```
}
```

```
}
```

```
class circle extends shape {
```

```
circle ()
```

```
{
```

```
side1 = getInput("Enter the radius of the  
circle: ");
```

```
}
```

```
void area()
```

```
{
```

```
double, area = Math.PI * side1 * side1;
```

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

```
}
```

```
}
```

```
class main {
```

```
{
```

```
public static void main (String Args[])
```

```
{
```

```
Rectangle rectangle = new Rectangle();
```

```
Triangle Triangle = new Triangle();
```

```
Circle Circle = new Circle();
```

```
rectangle.area();
```

```
Triangle.area();
```

```
Circle.area();
```

```
}
```

```
}
```

→ Output:

Enter the length of rectangle : 20

Enter the breadth of rectangle : 40

Enter the height of triangle : 8

Enter the base of triangle : 6

Enter the radius of circle : 4

Area of the Rectangle = 800.0

Area of the Triangle = 24.0

Area of the Circle = 50.2654

~~Ans~~  
02/01/24

```
Enter length of rectangle:
20
Enter breadth of rectangle:
40
Enter base of the triangle:
6
Enter height of the triangle:
8
Enter the radius of the circle:
4
Area of the Rectangle =800.0
Area of the triangle=24.0
Area of the circle=50.26548245743669
```