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LAB-4 Area of Triangle, Rectangle and circle

```
import java.util.Scanner;
abstract class shape {
    protected int side a;
    protected int side b;
    public shape (int side a, int side b)
    {
        this.side a = side a;
        this.side b = side b;
    }
    public abstract void printArea();
}
class Rectangle extends shape {
    public Rectangle (int length,
    int width) super (length, width);
}
    public void printArea() {
        int area = side a * side b;
        System.out.println("Area of Rectangle: " +
        area);
    }
}
class triangle extends shape {
    public Triangle (int base, int
    height) {
        super (base, height);
    }
    public void printArea() {
        double area = 0.5 * side a * side b;
        System.out.println("Area of Triangle: " +
        area);
    }
}
```

```
class Circle extends shape {
    public Circle (int radius) {
        super (radius, 0);
    }
}
```

```
public void printArea() {
    double area = MATH.PI * side a *
    side b;
```

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

}}}

```
public class shapes {
```

```
public static void main (String args[]) {
```

```
Scanner scanner = new Scanner(
System.in);
```

```
System.out.println ("Enter length &
width of Rectangle");
```

```
int rectlength = scanner.nextInt();
```

```
int rectwidth = scanner.nextInt();
```

```
Rectangle triangle = new Rectangle
(rectlength,
rectwidth);
```

```
System.out.println ("Enter h & b
for triangle");
```

```
int tribase = scanner.nextInt();
```

```
int rectwidth = scanner.nextInt();
```

```
Triangle triangle = new Triangle
(tribase, triheight);
```



```
System.out.println("Enter radius ");
int circleRadius = scanner.nextInt();
Circle ci circle = new circle(circleRadius);
```

```
Scanner.close();
rectangle.printArea();
triangle.printArea();
circle.printArea();
}
```

output:-

Enter length and Breadth for rectangle:
2 3

Enter base and height for triangle:
5 4

Enter radius for circle = 9

Area of Rectangle : 6

Area of triangle : 10.0

Area of circle : ~~254.47~~ 254.47

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