

23/10/24

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WEEK → 4

## Abstract in java.

```
abstract class Shape {
```

```
    protected int dimension1;
```

```
    protected int dimension2;
```

```
    public Shape (int dimension1, int dimension2) {
```

```
        this.dimension1 = dimension1;
```

```
        this.dimension2 = dimension2;
```

```
    }
```

```
    public abstract void printArea();
```

```
}
```

```
class Rectangle extends Shape {
```

```
    public Rectangle (int length, int width) {
```

```
        super (length, width);
```

```
    }
```

```
@Override
```

```
    public void printArea () {
```

```
        int area = dimension1 * dimension2;
```

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

```
    }
```

```
}
```

```
class Triangle extends Shape {
```

```
    public Triangle (int base, int height) {
```

```
        super (base, height);
```

```
    }
```

```
@Override
```

```
    public void printArea () {
```

```
        double area = 0.5 * dimension1 * dimension2;
```

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

```
    }
```

```
}
```



```

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

```

@ override

```

public void printArea () {

```

```

    double area = Math.PI * dimension 1 * dimension 1;
    System.out.println ("Area of circle : " + area);
}

```

```

}

```

```

public class Main {

```

```

    public static void main (String [] args) {

```

```

        Shape rectangle = new Rectangle (5, 10);
        rectangle.printArea ();

```

```

        Shape triangle = new Triangle (5, 10);
        triangle.printArea ();

```

```

        Shape circle = new Circle (7);
        circle.printArea ();

```

```

    }
}

```

```

}

```

Output .

Enter length of rectangle : 10

Enter width of rectangle : 20

Area of Rectangle : 200

Enter base of triangle : 5

Enter height of triangle : 10

Area of triangle : 25.0

Enter radius of circle : 5

Area of circle : 78.5391

Executed  
GJ  
23/10/24