

Lab-4

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```
import java.util. Scanner;  
import java.util. lang. Math;
```

```
abstract class Shape {
```

```
    int a, b;
```

```
    Shape (int a, int b) {
```

```
        this.a = a;
```

```
        this.b = b;
```

```
    }
```

```
    Shape (int a) {
```

```
        this.a = a;
```

```
    }
```

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

```
}
```

```
class Rectangle extends Shape {
```

```
    Rectangle (int a, int b) {
```

```
        super(a, b);
```

```
    }
```

```
    void printArea () {
```

```
        System.out.println ("Area of rectangle  
is: " + a * b);
```

```
    }
```

```
}
```

```

class Triangle extends Shape {
    Triangle (int a, int b) {
        Super (a, b);
    }
    void printArea () {
        System.out.println ("Area of triangle is: " + a * b / 2);
    }
}

```

```

class Circle extends Shape {
    Circle (int a) {
        Super (a);
    }
    void printArea () {
        System.out.println ("Area of circle is: " + Math.PI * Math.pow(a, 2));
    }
}

```

```

Public class Lab 4 {
    public static void main (String[] args) {
        Scanner sc = new Scanner (System.in);
        Shape s;
        Rectangle r = new Rectangle (4, 10);
    }
}

```

```
Triangle t = new Triangle (6, 3);  
circle c = new Circle (3);  
S = t;  
S = printArea();  
S = t;  
S = printArea();  
S = c;  
S = printArea();  
}  
}
```