

```
import java.util.Scanner;
import java.lang.Math;
abstract class Shape {
    int c, d;
    Shape (int a, int b) {
        this.c = a;
        this.d = b;
    }
    Shape (int a) {
        this.c = 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 : " + c * d);
    }
}
class Triangle extends Shape {
    Triangle (int a, int b) {
        super(a, b);
    }
}
```

```
void printArea() {
```

```
    System.out.println("Area of triangle is: " + c * d / 2);
```

```
}
```

```
}
```

```
class Circle extends Shape {
```

```
    Circle(int a) {
```

```
        super(a);
```

```
}
```

```
void printArea() {
```

```
    System.out.println("Area of circle is: " + Math.PI *
```

```
        Math.pow(c, 2)); }
```

```
public class ShapeMain {
```

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

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

```
        Shape s;
```

```
        System.out.println("Enter rectangle dimensions:");
```

```
        int len = sc.nextInt();
```

```
        int br = sc.nextInt();
```

```
        Rectangle r = new Rectangle(len, br);
```

```
        System.out.println("Enter triangle dimensions:");
```

```
        int b = sc.nextInt();
```

```
        int h = sc.nextInt();
```

```
        Triangle t = new Triangle(b, h);
```



Name of the Experiment :

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```
System.out.println("Enter circle radius");
```

```
int rad = sc.nextInt();
```

```
Circle c = new Circle(rad);
```

```
s = r;
```

```
s.printArea();
```

```
s = t;
```

```
s.printArea();
```

```
s = c;
```

```
s.printArea();
```

```
}
```

```
}
```