

```

abstract class Shape {
    int dim1;
    int dim2;

    public Shape(int dim1, int dim2) {
        this.dim1 = dim1;
        this.dim2 = dim2;
    }
    abstract void printArea();
}

class Rectangle extends Shape {
    public Rectangle(int length, int width) {
        super(length, width);
    }
    public void printArea() {
        int area = dim1 * dim2;
        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 * dim1 * dim2;
        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 * dim1 * dim1;
        System.out.println("Area of Circle: " + area);
    }
}

```

```
class calc {  
    public static void main(String[] args) {  
        Shape rectangle = new Rectangle(5, 3);  
        Shape triangle = new Triangle(4, 6);  
        Shape circle = new Circle(3);  
        rectangle.printArea();  
        triangle.printArea();  
        circle.printArea();  
    }  
}
```

```
C:\1BM23CS321>java Calc
Select a shape:
1. Rectangle
2. Triangle
3. Circle
1
Enter length of rectangle:
12
Enter width of rectangle:
11
Area of Rectangle: 132

C:\1BM23CS321>java Calc
Select a shape:
1. Rectangle
2. Triangle
3. Circle
2
Enter base of triangle:
12
Enter height of triangle:
12
Area of Triangle: 72.0

C:\1BM23CS321>java Calc
Select a shape:
1. Rectangle
2. Triangle
3. Circle
3
Enter radius of circle:
12
Area of Circle: 452.3893421169302

C:\1BM23CS321>_
```