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1TM19CS199

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LAB-4

```
abstract class Shape{
    int dim1;
    int dim2;

    Shape(int x, int y){
        dim1 = x;
        dim2 = y;
    }
    Shape(int rad){
        dim1 = dim2 = rad;
    }

    abstract double printArea();
}

class Rectangle extends Shape{
    Rectangle(int x, int y)
    {
        super(x, y);
    }
    double printArea(){
        return (dim1 * dim2);
    }
}

class Triangle extends Shape{
    Triangle(int x, int y)
    {
        super(x, y);
    }
```

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```
    double printArea(){
        return (dim1 * dim2)/2;
    }
}

class Circle extends Shape {
    Circle (int rad)
    {
        super(rad);
    }
    double printArea(){
        return ( 3.14 * dim1 * dim1);
    }
}

class Lab4 {
    public static void main (String args[]){
        Rectangle R = new Rectangle(10,8);
        Triangle T = new Triangle (4, 6);
        Circle C = new Circle (2);
        Shape ref;
        ref = R;
        System.out.println("Area of Rectangle: "+ref.printArea());
        ref=T;
        System.out.println("Area of Triangle: "+ref.printArea());
        ref=C;
        System.out.println("Area of Circle: "+ref.printArea());
    }
}
```