

Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea() that prints the area of the given shape.

```
abstract class Shape {
```

```
    int d1;
```

```
    int d2;
```

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

```
        this.d1=a;
```

```
        this.d2=b;
```

```
    }
```

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

```
}
```

```
class Rectangle extends Shape{
```

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

```
        super(l,b);
```

```
    }
```

```
    void printArea(){
```

```
        System.out.println("Area of rectangle is: "+d1*d2);
```

```
    }
```

```
}
```

```
class Triangle extends Shape{
```

```
    Triangle(int b,int h){
```

```
        super(b,h);
```

```
    }
```

```
    void printArea(){
```

```
        System.out.println("Area of triangle is: "+0.5*d1*d2);
```

```
    }
```

```
}
```

```
class Circle extends Shape{
```

```
    Circle(int r){
```

```
        super(r,0);
```

```
    }
```

```
    void printArea(){
```

```
        float c=(float)3.14*d1*d1;
```

```
        System.out.println("Area of circle is: "+c);
```

```
    }
```

```
}
```

```
public class Area {
```

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

```
        Rectangle r=new Rectangle(3, 5);
```

```
        Triangle t=new Triangle(4, 5);
```

```
        Circle c=new Circle(10);
```

```
        r.printArea();

        t.printArea();

        c.printArea();

    }

}
```

Output:

```
PS C:\Users\n6787\OneDrive\Desktop\java> cd "c:\Users\n6787\OneDrive\Desktop\java\" ; if ($?) { javac Area.java } ; if ($?) { java Area }
Area of rectangle is: 15
Area of triangle is: 10.0
Area of circle is: 314.0
PS C:\Users\n6787\OneDrive\Desktop\java>
```