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## → Program - 4

Develop a java program to create an abstract class named shape that consists two integers and an empty method named print Area(). Provide three class named Rectangle, Triangle and circle such that each one of the classes extends the class shape. Each of the class contain only the method print Area() that prints the area of given shape.

```
abstract class shape {
    double a, b;
    shape (int x, int y) {
        a = x;
        b = y;
    }
}
```

```
abstract void print Area ();
```

```
class rectangle extends shape {
    rectangle (int x, int y) {
        super (x, y);
    }
}
```

```
void print Area () {
    // implementation
}
```

```
class triangle extends shape {
    triangle (int x, int y) {
        super (x, y);
    }
}
```

```
class circle extends shape {
    circle (int x, int y) {
        super (x, y);
    }
}
```

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

```
class triangle extends shape {  
    triangle (int x, int y)  
    {
```

```
        super (x, y);  
    }
```

```
    void print Area ()  
    {
```

```
        System.out.println("Area of triangle is" + (0.5*a*b));  
    }
```

```
class circle extends shape {
```

```
    circle (int x, int y)  
    {
```

```
        super (x, y);  
    }
```

```
    void print Area ()
```

```
    {  
        System.out.println("Area of circle is" + (3.14*a*a));  
    }
```

```
class shape area {
```

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

```
        rectangle r1 = new rectangle (10, 20);
```

```
        triangle t1 = new triangle (5, 10);
```

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```
Circle C1 = new Circle(3,0);  
Shape r;  
r = C1;  
r.print Area();  
r = t1;  
r.print Area();  
r = C1;  
r.print Area();  
}  
}
```

a.

b.

c.

d.