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Develop java program to create an abstract class named shape that contains two integers and an empty method named printArea(). Provide three classes extends the class shape. Each one of the class contains only the method printArea() that prints the area of the given shape.

```
import java.util.Scanner
```

```
abstract class shape
```

```
{
```

```
    int a, b;
```

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

```
}
```

```
Class rectangle extends shape
```

```
{
```

```
    int area-rect;
```

```
    public void printArea
```

```
    {
```

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

```
        System.out.println("Enter the length and breadth of  
the rectangle");
```

```
        a = s.nextInt();
```

```
        b = s.nextInt();
```

```
        area-rect = a * b;
```

```
        System.out.println("Enter the length of rectangle: " + a +  
" breadth of rectangle: " + b);
```

```
        System.out.println("Area of rectangle: " + area-rect);
```

```
    }  
}
```


class triangle extends shape

{

public ^{double} ~~int~~ triangle-area;

public void printarea()

{

Scanner s = new Scanner(System.in);

Printf("enter the height and base of the triangle");

a = s.nextInt();

b = s.nextInt();

triangle-area = (a * b) / 2

Printf("height of triangle: " + a + "base of triangle" + b);

Printf("area of triangle" + triangle-area);

}

}

class circle extends shape

{

public ^{double} ~~int~~ circle-area;

public void printarea()

{

Scanner s = new Scanner(System.in);

Printf("Enter the radius of the circle");

a = s.nextInt();

circle-area = 3.14 * a * a;

Printf("area of circle" + circle-area);

}

}

class Shapeclass

{

public static void main(String args[])

{

rectangle r = new rectangle();

r.printarea();

triangle t = new triangle();

t.printarea();

Circle c = new Circle();

c.printarea();

}

}

Output

Enter the length and breadth of rectangle

2
3

length of rectangle: 2 breadth of rectangle: 3

area of rectangle: 6

Enter the height and base of triangle

2
3


height of triangle: 2 ~~breadth~~ base of triangle: 3

area of triangle: 3.0

Enter the radius of circle

3

area of circle: 28.2599


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