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papergrid

Date: / /

- 5 Develop a Java program to create an abstract class named Shape that contains two integers and an empty method name printArea(). Provide three classes named Rectangle, Triangle, 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 given shape.

```
import java.util.*;  
class InputScanner  
{
```

```
    int a, b;
```

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

```
    InputScanner()  
    {
```

from main

```
        if (this.getClass() == Circle.class)  
        {
```

```
            System.out.println("Enter the radius");  
            a = s.nextInt();
```

```
        }
```

```
    else  
    {
```

```
        System.out.println("Enter height and  
weight");
```

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

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

```
    }
```

```
}
```

```
}
```

```
abstract class Shape extends InputScanner  
{
```

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

```
}
```

abstract
class


```
class Rectangle extends Shape
{
    void printArea()
    {
        System.out.println("Area of the rectangle
                             is " + (double)(a*b));
    }
}

class Triangle extends Shape
{
    void printArea()
    {
        System.out.println("Area of triangle rectangle is " +
                             (double)(a*b)/2);
    }
}

class Circle extends Shape
{
    void printArea()
    {
        System.out.println("Area of circle is " +
                             (double)(3.14 * a*a));
    }
}

class AreaMain
{
    public static void main (String args[])
    {
        System.out.println("For triangle");
        Triangle t = new Triangle();
        System.out.println("For rectangle");
        Rectangle r = new Rectangle();
        System.out.println("For circle");
        Circle c = new Circle();
    }
}
```


1. print Area();

2. print Area();

3. print Area();

3

3

O/P :-

For triangle

Enter height and weight

2

3

For rectangle

Enter height and weight

4

5

For rectangle

Enter radius

5

Area of ~~rectangle~~ triangle is : 3.0

Area of ~~rectangle~~ rectangle is : 20.0

Area of circle is : 78.5

~~Don~~

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