

```
import java.util.*;

abstract class Shape {
    abstract void printArea();
    int x,y;
    Shape(int m,int n){
        x=m;
        y=n;
    }
}

class Rectangle extends Shape{
    Rectangle(int p, int q){
        super(p,q);
    }
    void printArea() {
        System.out.println("Area="+x*y);
    }
}

class Triangle extends Shape{
    Triangle(int p, int q){
        super(p,q);
    }
    void printArea() {
        System.out.println("Area="+x*y/2);
    }
}

class Circle extends Shape{
    Circle(int p){
        super(p,0);
    }
    void printArea() {
        System.out.println("Area="+(((float)x*x)*3.142));
    }
}

class Test{
    public static void main(String args[]){
        Scanner in= new Scanner(System.in);
        Shape sp;
        System.out.println("Enter length and breadth:");
        int m=in.nextInt();
        int n=in.nextInt();
        Rectangle r=new Rectangle(m,n);
        sp=r;
    }
}
```

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        sp.printArea();
        System.out.println("Enter height and base:");
        m=in.nextInt();
        n=in.nextInt();
        Triangle t=new Triangle(m,n);
        sp=t;
        sp.printArea();
        System.out.println("Enter radius:");
        m=in.nextInt();
        Circle c=new Circle(m);
        sp=c;
        sp.printArea();
    }
}

```

Output:

```

Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\Prg data> cd "d:\Prg data\Java\00J Lab\Sample\" ; if ($?) { javac Test.java } ;
Enter length and breadth:
10
20
Area=200
Enter height and base:
5
10
Area=25
Enter radius:
4
Area=50.272
PS D:\Prg data\Java\00J Lab\Sample> 

```