```java
import java.util.Scanner;

abstract class shape
{
   int a, b;
   abstract void printArea(int a, int b)
}

class Rectangle extends Shape.
{
   void printArea(int a, int b)
   {
   System.out.println ("area of Rectangle=
                   + (a * b) );}
}
Class Triangle  extends Shape
{
   void printArea(int a, int b)
   {
   System.out.println ("area ="+(a*b))
   }
}

class Circle extends Shape
{
   void printArea (int a, int b)
   {
   System.out.printf (" area ="%.2f"
                 3.14 *a*a)}
   }
}
```

```java
class ShapeMain
{
    public static void main(String[]
                                    args)
    {
        Scanner sc = new Scanner(System.i
        System.out.println(" Enter l & b');
        int l= sc.nextInt();
        int b =sc.nextInt();
        Rectangle R=new Rectangle();
        R.printArea(l,b);
        System.out.println("enter base
            and height of triangle");
        l = sc.nextInt();
        b = sc.nextInt().
        Triangle T= new Triangle ();
        T.printArea(l,b);

        System.out.println("Enter radius
            of circle");
        int r = sc.nextInt().

        circle c = new circle();
        C.printArea(r,o);

    }
}
```

```
      ┌---+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----+----0---+----1---+
1     /*Develop a Java program to create an abstract class named Shape that contains two integers and
2     an empty method named printArea( ). Provide three classes named Rectangle, Triangle and
3     Circle such that each one of the classes extends the class Shape. Each one of the classes contain
4     only the method printArea( ) that prints the area of the given shape.*/
5     import java.util.Scanner;
6
7     abstract class Shape
8   ⊟{
9         int a,b;
10        abstract void printArea(int a,int b);
11    }
12
13    class Rectangle extends Shape
14  ⊟{
15  ⊟    void printArea(int a,int b){
16            System.out.println("area of rectangle="+(a*b));}
17
18    }
19    class Triangle extends Shape
20  ⊟{
21  ⊟    void printArea(int a,int b){
22            System.out.println("area of triangle="+(0.5*a*b));}
23
24    }
25    class Circle extends Shape
26  ⊟{
27  ⊟    void printArea(int a,int b){
28            System.out.printf("area of circle=%.2f",(3.14*a*a));}
29
30    }
31    class  ShapeMain
32  ⊟{
33        public static void main(String[] args)
34  ⊟    {
35                Scanner sc=new Scanner(System.in);
36                System.out.println("enter length and breadth of rectangle");
37                int l=sc.nextInt();
38                int b=sc.nextInt();
39                Rectangle R=new Rectangle();
40                R.printArea(l,b);
41
42                System.out.println("enter base and height of triangle");
```

```
        ----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+--
28              System.out.printf("area of circle=%.2f",(3.14*a*a));}
29
30  }
31  class  ShapeMain
32 {
33      public static void main(String[] args)
34      {
                Scanner sc=new Scanner(System.in);
                System.out.println("enter length and breadth of rectangle");
                int l=sc.nextInt();
                int b=sc.nextInt();
                Rectangle R=new Rectangle();
                R.printArea(l,b);

                System.out.println("enter base and height of triangle");
                l=sc.nextInt();
                b=sc.nextInt();
                Triangle T=new Triangle();
                T.printArea(l,b);

                System.out.println("enter radius of circle");
                int r=sc.nextInt();

                Circle C=new Circle();
                C.printArea(r,0);


        }
 }
```

```
enter length and breadth of rectangle
2 4
area of rectangle=8
enter base and height of triangle
2 10
area of triangle=10.0
enter radius of circle
3
area of circle=28.26Press any key to continue . . .
```