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

```java
import java.util.*;
abstract class Shape{
        int a,b;
        Shape(int x, int y){
                a=x;
                b=y;
        }
        abstract double printArea();
}
class Rectangle extends Shape{
        Rectangle(int length,int breadth){
                super(length,breadth);
        }
        double printArea(){
                return a*b;
        }
}
class Triangle extends Shape{
        Triangle(int length, int height){
                super(length,height);
        }
        double printArea(){
                return 0.5*a*b;
        }
}
```

```java
class Circle extends Shape{
        Circle(int r){
                super(r,r);
        }
        double printArea(){
                return Math.PI*a*b;
        }
}


class AREA{
        public static void main(String args[]){

                Rectangle R=new Rectangle(10,20);
                Triangle T=new Triangle(15,30);
                Circle C=new Circle(5);

                Shape s;
                s=R;
                System.out.println("Area of the Rectangle : " +s.printArea());
                s=T;
                System.out.println("Area of the Triangle : " +s.printArea());

                s=C;
                System.out.println("Area of the Circle : " +s.printArea());
        }
}
```
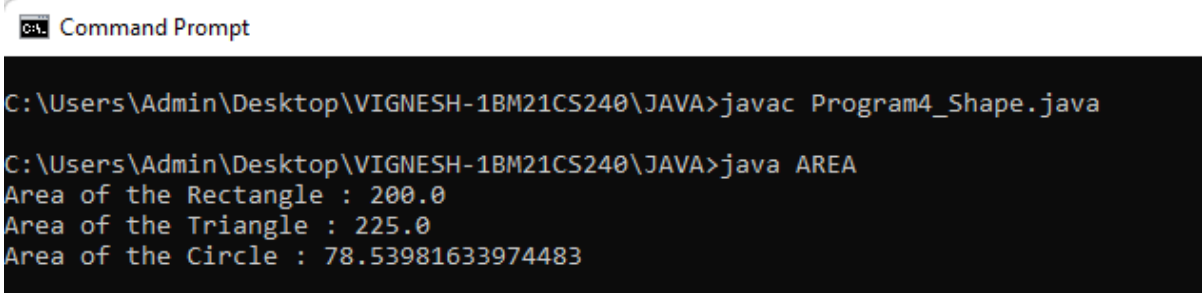
OUTPUT:


```
Command Prompt

C:\Users\Admin\Desktop\VIGNESH-1BM21CS240\JAVA>javac Program4_Shape.java

C:\Users\Admin\Desktop\VIGNESH-1BM21CS240\JAVA>java AREA
Area of the Rectangle : 200.0
Area of the Triangle : 225.0
Area of the Circle : 78.53981633974483
```