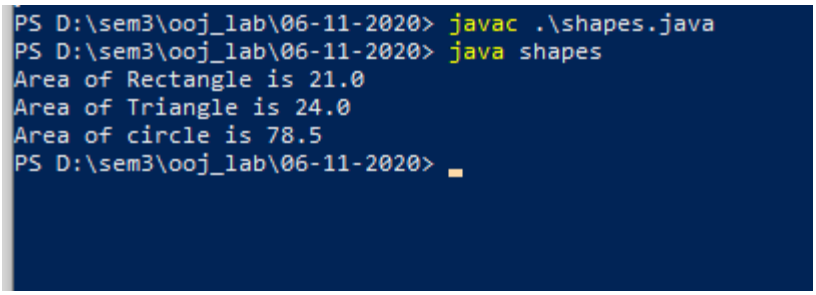
NAME: S SKANDA BATCH 2 USN: 1BM19CS137

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 containonly the method printArea( ) that prints the area of the given shape.

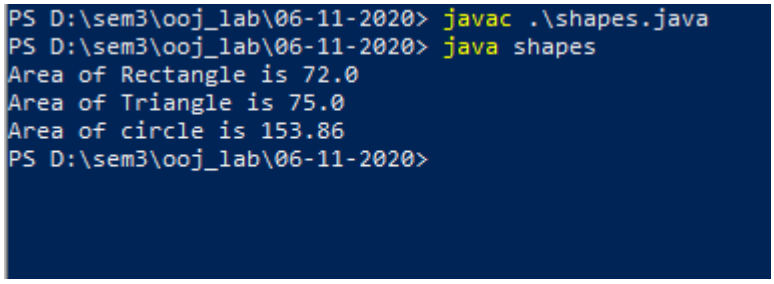
```
abstract class shape {
  int dim1;
  int dim2;
  shape(int a, int b) {
  dim1 = a;
  dim2 = b;
  }
  abstract void area() ;
}
class Rectangle extends shape {
  Rectangle(int a, int b) {
  super(a, b);
  }
  void area() {
    double area = dim1 * dim2;
  System.out.println("Area of Rectangle is "+area);
  }
}
class Triangle extends shape {
  Triangle(int a, int b) {
  super(a, b);
  }
  void area() {
    double area=dim1 * dim2 / 2;
  System.out.println("Area of Triangle is "+area);
  }
}
```

```
class Circle extends shape {
  Circle(int a, int b) {
  super(a, b);
  }
  void area() {
  double area = dim1 * dim1 *3.14;
  System.out.println("Area of circle is "+area);
  }
}
class shapes {
  public static void main(String args[]) {
  Rectangle r = new Rectangle(7, 3);
  Triangle t = new Triangle(6,8 );
  Circle c = new Circle(5,5);
  shape s;
  s = r;
  s.area();
  s = t;
  s.area();
  s = c;
  s.area();
  }
}
```

OUTPUT:




```
/*
  Rectangle r = new Rectangle(9, 8);
  Triangle t = new Triangle(10,15 );
  Circle c = new Circle(7,7);
*/
```


PS D:\sem3\ooj_lab\06-11-2020> javac .\shapes.java
PS D:\sem3\ooj_lab\06-11-2020> java shapes
Area of Rectangle is 72.0
Area of Triangle is 75.0
Area of circle is 153.86
PS D:\sem3\ooj_lab\06-11-2020>

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