**Question 1**

package project;

public class MyPoint {

private double x;

private double y;

public static void main(String[] args) {

MyPoint p1 = new MyPoint();

MyPoint p2 = new MyPoint(10,30.5);

System.out.println(p1);

System.out.println(p2);

}

MyPoint() {

this(0.0 , 0.0);

}

MyPoint(double x, double y) {

this.x = x;

this.y = y;

}

double getX() {

return this.x;

}

double getY() {

return this.y;

}

public String toString() {

String info = "x:"+ this.x + " y:" + y;

return info;

}

}

Output:

x:0.0 y:0.0

x:10.0 y:30.5

**Question 4**

package project;

public class Rectangle {

double width;

double height;

MyPoint center;

double area;

public static void main(String[] args) {

Rectangle r1 = new Rectangle(10,20);

System.out.println(r1);

Rectangle r2 = new Rectangle();

System.out.println(r2);

}

Rectangle(double x, double y) {

this.width = x;

this.height = y;

this.area = this.height\*this.width;

this.center = new MyPoint(((this.width)/2),((this.height)/2));

}

Rectangle () {

this(1.0,1.0);

}

double getWidth() {

return this.width;

}

double getHeight() {

return this.height;

}

MyPoint getCenter() {

return this.center;

}

double getArea() {

return this.width\*this.height;

}

public String toString() {

String info = "Height:"+ this.height + " Width:" + width + " Center:(" + center + ")" + " Area:" + area;

return info;

}

}

Output:

Height:20.0 Width:10.0 Center:(x:5.0 y:10.0) Area:200.0

Height:1.0 Width:1.0 Center:(x:0.5 y:0.5) Area:1.0

**Question 5**

package project;

public class Square extends Rectangle{

public static void main(String[] args) {

Square s1 = new Square();

System.out.println("Width:"+s1.getWidth());

System.out.println("Area:"+s1.getArea());

System.out.println(s1);

}

Square(double length, MyPoint point) {

this.center = point;

this.height = length;

this.width = length;

}

Square() {

this(1.0, new MyPoint(0.5,0.5));

}

}

Output:

Width:1.0

Area:1.0

Height:1.0 Width:1.0 Center:(x:0.5 y:0.5) Area:1.0