

**Default Constructor: Circle()**

Input: new Circle()

Expected Output: Circle object with x=0, y=0, and radius=10

**Second Constructor: Circle(double x, double y, double radius)**

Input: new Circle(5, 5, 15)

Expected Output: Circle object with x=5, y=5, and radius=15

**Second Constructor with radius exceeds maximum: Circle(double x, double y, double radius)**

Input: new Circle(5, 5, 1000)

Expected Output: Circle object with x=5, y=5, and radius=100(Maximum radius set in the Circle class)

**Get Circumference: double circumference()**

Input: new Circle(5, 5, 15).circumference()

Expected Output:  $2 * \text{PI} * \text{radius} = 2 * \text{PI} * 15 \approx 94.2477796077$

**Get Area: double area()**

Input: new Circle(5, 5, 15).area()

Expected Output:  $\text{PI} * \text{radius}^2 = \text{PI} * 15^2 \approx 706.8583470577$

**Set radius less than the maximum(100): void setRadius(double r)**

Input: new Circle(5, 5, 15).setRadius(10)

Expected Output: radius of the Circle object has to be change to 10 from 15

**Set radius exceeds the maximum(100): void setRadius(double r)**

Input: new Circle(5, 5, 15).setRadius(1000)

Expected Output: radius of the Circle object has to be change to 100 which is the maximum radius set in the Circle class

**If the coordinates is inside of the circle: boolean isInside(double x, double y)**

Input: new Circle(5, 5, 15).isInside(0, 0)

Expected Output: True

**If the coordinates is outside of the circle: boolean isInside(double x, double y)**

Input: new Circle(5, 5, 15).isInside(30, 0)

Expected Output: False

**Move coordinates: void move(double x, double y)**

Input: new Circle(5, 5, 15).isInside(5, 5)

Expected Output: coordinates of the circle has to be change to (10, 10) from (5, 5)

**Print Attributes: void printAttributes()**

Input: new Circle(5, 5, 15).printAttributes()

Expected Output: Prints attributes of the Circle object

e.g.) Coordinates(X, Y): 5, 5

Radius: 15

Circumference: 94.2477796077

Area: 706.8583470577