

Lab11: Circle Class (Due at the end of the period)

You may use `Math.sqrt()` throughout this lab. Ex, `double a = Math.sqrt(4); // a = 2`

You may approximate `pi = 3.14`.

You may NOT use other Math functions.

Part 1: Create a Circle class that has double radius, x, and y, where x and y represent the coordinates of the center of the circle. Include 2 constructors.

//Insert Code with comments here:

Part 2: In the Main class, create the following functions:

`public static double circleArea(Circle c);`

`public static double circumference(Circle c);`

//Insert Code with comments here:

Part 3: In the Main class, create a `main()` function that computes and prints the area and circumference of circles with radii 3,5,7,9,11,13,15,17, and 19.

//Insert Code with comments here:

Part 4: In the Main class, create the following 2 functions:

`isTangent(Circle a, Circle b)` that returns true if the circles touch in exactly 1 point, false otherwise.

`isOverlap(Circle a, Circle b)` that returns true if the circles overlap in 1 or more points, false otherwise.

//Insert Code with comments here:

Part 5: In the `main()` function create and submit thorough test code to test `isTangent()` and `isOverlap()` functions.

//Insert Code with comments here: