

# CS 1301

## Recitation Assignment - Intro to Pair Programming

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So, you've been paired up with your partner, introduced yourselves, and become best friends. It's time to try writing your first program together! For this assignment, you will be coding two functions, `circleArea` and `circleCircumference`.

Be sure to trade off the "Driver" and "Navigator" position so that you both get experience with each position. At a minimum, you should switch when you finish the first function, but feel free to switch even more frequently.

### Part 1 – `circleArea`

Go ahead and assign yourselves to the driver and navigator roles. Your jobs are to write a function, `circleArea`, that takes in one parameter, the circle's **radius**, and prints the circle's area to the screen. Recall that the area of a circle is equal to  $\pi * \text{radius} * \text{radius}$  ( $\pi$  times the radius squared).

Please use `math.pi` for  $\pi$  in your function. You will need to use `'import math'` at the beginning of your program in order to use this expression.

Your function should print the result in the following format (without quotes):

"The circle's area is xxx"

With xxx being the area your program calculated.

#### Example Output:

```
>>> circleArea(1)
The circle's area is 3.14159265359
>>> circleArea(2)
The circle's area is 12.5663706144
>>> circleArea(100)
The circle's area is 31415.9265359
>>>
```

## Part 2 – circleCircumference

Go ahead and switch roles (i.e. if you were the navigator for the last function, try being the driver this time.) Your next task is to write a function, `circleCircumference`, that, you guessed it, calculates the circumference of a circle. It should take only one parameter, the circle's **diameter** (not the radius), and should **return** (not print) the result as a float. Recall that the circumference of a circle is equal to  $2 * \pi * \text{radius}$  (2 times pi times the radius of the circle).

Please use `math.pi` for pi in your function. You will need to use `'import math'` at the beginning of your program in order to use this expression.

### Example output:

```
>>> circleCircumference(1)
3.1415926535897931
>>> circleCircumference(2)
6.2831853071795862
>>> circleCircumference(100)
314.15926535897933
```

Congratulations! Hopefully, you and your new programming partner were able to work well together. Go ahead and type: `print ("Good job!")` into your shell. You deserve it.

## Rubric – Check your work

### Part I

- Created a function named `circleArea`
- Calculates the correct area
- Prints the result to the screen in the correct format
- The result is a floating point number

### Part II

- Created a function named `circleCircumference`
- Calculates the correct circumference
- Returns the result
- The result is a float