CS 1301 Recitation Assignment - Intro to Pair Programming

10 points

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 experiance 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 (5 points)

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 * radius * 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 (5 points)

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 * 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

Part I

- Created a function named circleArea – 1pt

- Calculates the correct area – 2pts

- Prints the result to the screen in the correct format – 1pt

- The result is a floating point number – 1pt

Part II

- Created a function named circleCircumference – 1pt

- Calculates the correct circumference – 2pts

- Returns the result – 1pt

- The result is a float – 1pt