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, kilo2Miles and pTheorem in your recitation with your pair programming partner.

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 - kilo2Miles (5 points)

Go ahead and assign yourselves to the driver and navigator roles. Your jobs are to write a function, kilo2Miles, which takes in one parameter, the distance in kilometers, and prints the distance, in miles, onto the screen. Recall that the conversion from kilometers to miles is: 1 kilometer = .6214 miles

Your function should print the result in the following format (without quotes): “xxx kilometers is equal to yyy miles” with xxx being the original distance and yyy being the new calculated distance.

Example Output:

>>> kilo2Miles(2)
2 kilometers is equal to 1.2428 miles

>>> kilo2Miles(5)
5 kilometers is equal to 3.107 miles

>>> kilo2Miles(100)
100 kilometers is equal to 62.14 miles
Part 2 - pTheorem (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, pTheorem, that uses the Pythagorean Theorem. It should take two parameters, \(a\) and \(b\), and return (not print) \(c\). Recall that the formula is: \(c = \sqrt{a^2 + b^2}\)

Please use math.sqrt for the square root in your function (ex. math.sqrt(4) == 2). You will need to use ‘import math’ at the beginning of your program in order to use this expression.

Example output:

```python
g>>> x = pTheorem(3,4)
g>>> x
5.0
g>>> y = pTheorem(5,12)
g>>> y
13.0
g>>> z = pTheorem(5,6)
g>>> z
7.810249675906654
```

Congratulations! Hopefully, you and your new programming partner were able to work well together. Go ahead and type: print “Good job!” into your IDLE window. You deserve it.

Rubric

Part I
- Created a function named kilo2Miles - 1pt
- Calculates the correct conversion - 2pts
- Prints the result to the screen in the correct format - 2pt

Part II
- Created a function named pTheorem - 1pt
- Calculates the correct \(c\) value - 2pts
- Returns the result - 1pt
- The result is a float - 1pt