

# CS 1301

## Recitation Assignment - Intro to Pair Programming

10 points

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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, `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:

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