Make sure you have the tutorial open when answering the following questions. All of the questions in this module use the Python Tutorial at:

* <http://www.letslearnpython.com/learn/>

Note: You should use the black area of Repl to try the simple Python expressions listed in the questions below.

**Lesson 8: Lists – A Collection of Objects**

1. What is a list in Python? Explain in words and provide an example.

A list in Python is to add many strings together and put them in a group. An example of this is creating a fruit list and putting strings that are fruits.

1. Create a list of your favorite sports teams.
   1. Assign your list to a variable. Called “myTeams”
   2. Use the command print(myTeams) to confirm that your variable and your list are the same.

myTeams = ("Toronto Maple Leafs", "Toronto Raptors")

print (myTeams)

1. Add a team to your list using “+”.
   1. Verify that + can be used to add two lists
   2. Write you Python code below

myTeams = ("Toronto Maple Leafs", "Toronto Raptors")

print (myTeams + "Blue Jays")

1. Create a list containing your favorite colour, your favorite number, and the name of someone you know. Show how to write this list in Python code below.  
   aboutMe = ('My favourite colour is Blue, my favourtie number is 4, and someone I know is Harman')

print(aboutMe)

1. Do Python lists have to contain elements that are all the same data type? Answer **True** / False.

**Lesson 8: Lists – List Indexes**

1. What is the value of myTeams[0]? (Assuming that you have created a list of your favorite sports teams in the previous questions.)

The value of myTeams[0] is Toronto Blue Jays

What is the list index of the last team in your list of favorite sports teams? Provide the Python code below.

myTeams = ('Toronto Maple Leafs', 'Toronto Raptors')

print (myTeams[1])

1. Compare Python lists to Python strings.
   1. How are lists and strings similar?

Lists and strings are very similar, a list is essentially a group of strings, it makes a string for words instead of letters.

* 1. How are they different?

They are different by the way lists and strings are organized, instead of dividing each letter it places words meaning you cannot have specific letters placed.

1. In the tutorial, why does typing “fruit[3]” produce an error?

It produces an error because there are only three items on the list, since it starts at 0, there is not actually a third variable.

**Lesson 10: Loops – Counted Loops**

1. Use a counted loop to print out your list of favorite sports teams. Provide your code below.
   1. What is the function of “in”

myTeams = ("Toronto Maple Leafs", "Toronto Raptors")

for myNum in [1, 2, 3, 4, 5]:

print (myTeams, myNum)

The function of “in” to command the variabl;e to be placed in the loop.

1. Compare Counted Loops to Conditional Loops.
   1. How are they similar?

They both can be set to a specific number on when to end the loop.

* 1. How are they different?

Counted loops are exact numbers on when to close off while conditional loops go on until it has reached a certain number.