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 a collection of things that are wrapped in square brackets. They can be assigned to a variable.

1. Create a list of your favorite sports teams.
   1. Assign your list to a variable. Called “myTeams”
2. myTeams = ["Raptors", "Maple Leafs","Real Madrid"]
3. print(myTeams)
   1. Use the command print(myTeams) to confirm that your variable and your list are the same.

['Raptors', 'Maple Leafs', 'Real Madrid']

1. Add a team to your list using “+”.
   1. Verify that + can be used to add two lists

This can be used as adding the two variables combined the lists

* 1. Write you Python code below

myTeams = ["Raptors", "Maple Leafs","Real Madrid"]

myTeamsTwo = ["Toronto FC", "pelicans"]

myTeams + myTeams two

['Raptors', 'Maple Leafs', 'Real Madrid', 'Toronto FC', 'pelicans']

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.

list = ["red", 1,"Keerat"]

print(list)

['red', 1, 'Keerat']

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

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.)

Raptors

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

myTeams=["Raptors", "Maple Leafs","Real Madrid"]

print(myTeams[2])

'Real Madrid'

The list index for the last team is [2]

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

They are similar as they both can hold characters

* 1. How are they different?

List can have any type of data and strings can only hold characters

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

The list index is out of range as the list starts of at 0 and ends at 2.

**Lesson 10: Loops – Counted Loops**

1. Use a counted loop to print out your list of favorite sports teams. Provide your code below.

myTeams=["Raptors", "Maple Leafs","Real Madrid"]

for myTeams in ["Raptors", "Maple Leafs","Real Madrid"]:

print(myTeams)

* 1. What is the function of “in”

The reason for “in” is it tells what to loop in the code loops what is in the list

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

They both repeat a task repeatedly

* 1. How are they different?

Counting loops repeat a certain number of times and conditional loops keep going until a certain thing happens or as long as the condition is true