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. For example you can have a list of numbers like 1, 2, 3, 4, and 5.

1. Create a list of your favorite sports teams.
   1. Assign your list to a variable. Called “myTeams”

myTeams = [“Toronto Raptors”, “Houston Rockets”, “FC Barcelona”]

* 1. Use the command print(myTeams) to confirm that your variable and your list are the same.

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 Raptors", "Houston Rockets", "FC Barcelona"] + ["Manchester United"]

print (myTeams)

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.

myList = ["blue", "22", "Bob"]

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.)

“Toronto Raptors”

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

myTeams[3]

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

Lists and strings both have index numbers that start at 0

* 1. How are they different?

Lists contain many values while a string contains only one. Also, strings can only contain characters while lists can contain any variable type.

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

Because the list only has 3 things and the index numbers start at zero so the last thing in the list is 2.

**Lesson 10: Loops – Counted Loops**

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

myList = ["Toronto Raptors", "Houston Rockets", "FC Barcelona"] + ["Manchester United"]

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

print(myList)

* 1. What is the function of “in”

In says that for all of these numbers, print something out.

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

They both repeat a line of code for a certain amount of time.

* 1. How are they different?

Counted loops repeat code for as many times as you tell it while conditional loops repeat code for as long as the condition given is true.