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 exactly what it means; a list of items. Ex. [1, 2, 3, 4, 5.5]

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

myTeams = [1, 2, 3] + [4, 5, 6]

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, 7, Harman]
2. 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.)

The value of myTeams[0] is the number 1.

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

myTeams = [1, 2, 3] + [4, 5, 6]

The index of the last team is 5.

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

Lists and strings are a combination of items

* 1. How are they different?

They are different because lists can have different data types in them, whereas strings can only have one data type.

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

There is not a 4th item, so the index 3 does not have an item to be indexed.

**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”

“in” is used to see if an item is in a list. Ex. “*in* myTeams”

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

They both repeat, in a loop.

* 1. How are they different?

Counted loops repeat a certain number or times, whereas conditional loops keep going until something happened (or until the condition is True).