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 group of values either text or numbers in an order that may be printed or listed

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

myTeams = ["gamers", "yes", "hello"]

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

myTeams = ["gamers", "yes", "hello"]

print myTeams

["gamers", "yes", "hello"]

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

You can, as it just lists all parts off the 2 lists

* 1. Write you Python code below

fruit = ["apple", "banana", "grape"]

fruit2 = ["appl23e", "banana", "grape"]

trueFruit = fruit + fruit2

print (trueFruit)

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.

favorites = ["red", 1000, "damian"]

print favorites

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

False, you can use both Numbers and Text for a list.

**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 for myTeams[0] is “gamers”

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

myTeams = ["gamers", "yes", "hello"]

print (myTeams[2])

"hello"

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

Strings and Lists can be used to single out either a single letter or word in a group of text, making Strings and Lists very similar, with the main difference being the size at which each is defined

* 1. How are they different?

The size at which they are defined, Strings use 1 word, while lists use multiple, with each word having its own number instead of each letter in strings

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

There is no 4th word in the fruit variable, due to the way python detects strings and lists, the list that's with 0, and gradually goes up by 1s

**Lesson 10: Loops – Counted Loops**

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

import time

myTeams = ["gamers", "yes", "hello"]

for numberRange in [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]:

print ("My favorite team is", myTeams, "and this is number", numberRange)

time.sleep(0.1)

* 1. What is the function of “in”

It’s function is to check the range in order to test if the number in that range has been used yet

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

They can both loop text and functions in the program

* 1. How are they different?

They both end differently, one ends if a condition is false, while the other ends once the range of numbers no longer has anything left for it