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 4: Strings – Strings and Lesson 4: Strings – Examples**

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

Strings are blocks of text in a program

1. Explain why typing “apple” works and why typing apple without quotes gives an error.

This works because python recognizes it as a block of text instead of code

1. Is there a difference between typing “apple” and ‘apple’. (i.e. is there a difference between using single or double quotes.

In double quotes you can use single quotes without it disturbing the text but you can’t do it with single quotes since it thinks your ending the text block there.

1. Explain why typing “apple’ gives an error.

**To start with one type of quotes you have to end with the same type**

1. Explain why “2 + 5” does not equal 7 and how it is different from typing 2 + 5.

This is because it is text not an integer

**Lesson 4: Strings – Operators**

1. Type “appl” + “e” and explain what it does. Why do you think this works?

This works because you can always add on stuff at the end

1. Type “apple” - “e” and explain what it does. Why do you think this gives an error?

You cannot subtract it because python sees it as text not an integer so it doesn’t know what to do

1. Type “Hello” \* 10 and explain what it does. Why do you think this works?

Like I said before its easy to add stuff at the end.

1. Type “Hello” / 10 and explain what it does. Why do you think this gives an error?

Like I said before python doesn’t know what to do since it isn’t an integer

1. The ***concatenation*** operator (+) is very useful for working with strings. Explain ***concatenation*** with words and examples.

It is useful to add on things at the end of strings since it can tell us a lot of things in various programs.

**Lesson 4: Strings – Indexes and Lesson 4: Strings – Indexes Examples**

1. Create a string using the letters in your first name and write down the ***index*** number for each letter.
2. myString = 'Hello World!'
3. print(myString[0:6])
4. Explain why print(“Hello!”[4]) does not print “l”.

This is because the first letter starts at an index of 0

1. What does print(“Hay, Bob!”[4]) print? For a hint try print(“Hay, Bob!”[3]) and print(“Hay, Bob!”[5])

It prints “ “

1. Answer True or False: “String indexes in Python begin at 0”. Do you need to know the reason for this or do you just need to remember this?

True because all the digits in python go to 0 - 9

**Lesson 5: Variables**

1. Complete “Lesson 5: Variables – Save a Value” by typing the sample commands in the black area of the IDE.
   1. What do you get if you type puppies / 3?
      1. Type Error
   2. Why doesn’t typing kittens / 3 work?
      1. Because you can’t compare a int and str
2. Complete “Lesson 5: Variables – Math Operators” by typing the sample commands in the black area of the IDE.
   1. Explain what happens for following sequence of commands:
      * colour = “red”
        1. colour gets the value “red”
      * puppies = 36
        1. puppies gets the value of 36
      * colour + puppies
        1. it won’t work since you cant compare an Int with a STR
3. Complete “Lesson 5: Variables – String Operators” by typing the sample commands in the black area of the IDE.
   1. Explain why the following commands give different results:
      * Color + day \* fishes
        1. redfridayfriday
      * ( Color + day ) \* fishes
        1. redfridayredfriday
4. Complete “Lesson 5: Variables – Indexes” by typing the sample commands in the black area of the IDE.
   1. What is the index of ‘r’ in “watermelon”?
      1. 4
   2. Write an expression using mynumber to return ‘r’
      1. watermelon = 'watermelon'
      2. myNumber = watermelon[4]
5. Integers (numbers) and Strings (letters) are different data types in Python?
   1. What doesn’t “friend” + 5 work?
      1. Because 5 is an interger and friend is a string
   2. What is the difference between the ***int*** and ***str*** data types?
      1. Int is a number and str is block of text