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.

**Used as text, symbols put together like words in a sentence example: "puppy dog"**

**"Hello!"**

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

**“apple” will work because it has a quotations, when you type apple it will not read because python wont recognize the string**

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

**There is no difference**

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

**It uses two different quotes**

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

**If you want Python to read a string, it must be inside quotes**

**Lesson 4: Strings – Operators**

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

**It says apple since it added apple to the e, the plus probably means to put them together**

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

**You cant subtract e from a letter**

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

**It repeats the word 10 times because you multiplied by 10**

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

**This gives an error because “/” is a non-supported string**

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

**One uses this to add words side to side. One can use this by typing "Hi" + "there!". This puts the “Hi” and “there” together.**

**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.

"Z" + "A" + "V" +"E" + "R" + "E"

0 1 2 3 4 5

1. Explain why print(“Hello!”[4]) does not print “l”.

**Because the 5th letter of the word is “o” and not “i”**

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

**This prints the space in between the “,” and “B”**

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. You only need to remember this**.

**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?

You get an error

* 1. Why doesn’t typing kittens / 3 work?

**This does not work because the “/” is unsupported as you cannot divide a word.**

1. 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”
      * puppies = 36
      * colour + puppies

**You get an error because you need to assign a number and a word to two variables**

1. 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
      * ( Color + day ) \* fishes
      * They give different results because of the brackets as they have to follow the bed mass format.

1. 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”?

4

* 1. Write an expression using mynumber to return ‘r’  
        **mynumber = 4**

**fruit[mynumber-2]**

1. Integers (numbers) and Strings (letters) are different data types in Python?
   1. What doesn’t “friend” + 5 work?

**Because you cannot mix strs (strings) ans ints (integers)**

* 1. What is the difference between the ***int*** and ***str*** data types?

**Int refers to whole numbers whereas str refers to words.**