Make sure you have the tutorial open when answering the following questions. All of the questions in this module use the Python Tutorial at:

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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.

When we use the word *string* in programming, we're talking about characters, like letters or symbols, or a bunch of characters put together, like words.

2. Explain why typing "apple" works and why typing apple without quotes gives an error.

In order for it to read strings it needs quotes on the ending otherwise it doesn't realize it is reading the command.

3. Is there a difference between typing "apple" and 'apple'. (i.e. is there a difference between using single or double quotes.

No there is not a difference..

4. Explain why typing "apple' gives an error.

The reason an error occurs is due to the fact that the quotations are different.

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

The difference is that with quotations it is seen as a string command causing it to be seen as one like how a text is seen.

Lesson 4: Strings – Operators

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

It writes the word apple, I think it works like this because they are in different quotations which is basically telling the computer that they are two different texts.

2. Type "apple" - "e" and explain what it does. Why do you think this gives an error?

It gives an error; this may be due to the fact that the subtraction symbol is also a dash sign.

3. Type "Hello" * 10   and explain what it does. Why do you think this works?

It makes Hello write out 10 times, this works because the "*" symbol meaning is only to multiply.

4. Type "Hello" / 10 and explain what it does. Why do you think this gives an error?

It gives an error, this is because "/" has more than one meaning

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

The concatenation operator is essentially an addition, it works well with words because it allows you to add letters in order to make words.

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.

"A" + "r" + "m" + "i" + "n"

  0   1   2   3   4

2. Explain why print("Hello!"[4]) does not print "l".

It does not print "l" because the first number it starts off with is always 0, making 4 be "o".

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

For 4 it prints B, for 3 it prints ",", and for 5 it prints "o".

4. 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 just need to remember because there is no important reason other than it starts with 0 instead of 1.

Lesson 5: Variables

1. Complete "Lesson 5: Variables – Save a Value" by typing the sample commands in the black area of the IDE.

   a. What do you get if you type puppies / 3?

   It gives error because puppies is not defined.

   b. Why doesn't typing kittens / 3 work?

   It does not work because you cannot divide a word.

2. Complete "Lesson 5: Variables – Math Operators" by typing the sample commands in the black area of the IDE.

   a. Explain what happens for following sequence of commands:

   · colour = "red"

   · puppies = 36

   · colour + puppies

You get an error because you need to assign the word to a number.

3. Complete "Lesson 5: Variables – String Operators" by typing the sample commands in the black area of the IDE.

   a. Explain why the following commands give different results:

   · Color + day * fishes

   · (Color + day) * fishes

   Brackets follow BEDMAS order.

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4. Complete "Lesson 5: Variables – Indexes" by typing the sample commands in the black area of the IDE.

   a. What is the index of 'r' in "watermelon"?

   4

   b. Write an expression using mynumber to return 'r'

   myNumber = 6

   c. fruit(myNumber – 4)

5. Integers (numbers) and Strings (letters) are different data types in Python?

   a. What doesn't "friend" + 5 work?

   That's because it contains numbers and letters which do not work.

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

Intis for numbers whereas str data types are for words.