1. In the below elements which of them are values or an expression?

eg:- values can be integer or string and expressions will be mathematical operators.

|  |  |
| --- | --- |
| Elements | Values |
| \* | Expression \ Operators |
| 'hello' | String |
| -87.8 | Integer value |
| - | Expression \ Operators |
| / | Expression \ Operators |
| + | Expression \ Operators |
| 6 | Integer value |

2. What is the difference between string and variable?

|  |  |
| --- | --- |
| String | Variable |
| String is a type of information you would store in a variable | Variables are containers for store data values. |
| A string is usually words, enclosed with single or double quote | A variable can store everything from strings and numbers |
| String is a data type | A variable can have a short name or a more descriptive names. |

3. Describe three different data types.

|  |  |
| --- | --- |
| Data Types |  |
| Integer | It can store only numeric values. Ex: I = 10,23,34 |
| Float | It can store numeric values with decimal point. Ex: j = 12.34, 454.32, 44.55 |
| Complex | Its represented as complex class and stores the real part + imaginary part value. Ex: x = 4+5j. 6+4j |

4. What is an expression made up of? What do all expressions do?

*An expression is combination of variable, operators and method invocations. An expression need to be evaluated. An expression is a statement that returns a value.*

5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

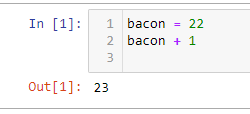
|  |  |
| --- | --- |
| Expression | Statement |
| An expression always evaluates to a value | A statement executes something |
| The evaluation of a statement doesn’t changes state | The execution of a statement changes state |
| Evaluation of an expression always produces or returns a result value | Execution of a statement may or may not produces or displays a result value. It only does whatever the statement says. |
| Every expression can’t be a statement | Every statement can be an expression |
| Example:  a + 16  output : 20 | Example:  x = 3  Print(x)  Output : 3 |

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

*Answer: bacon variable contains 23. Screenshot below for reference.*

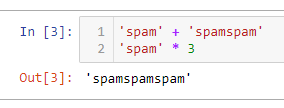


7. What should the values of the following two terms be?

'spam' + 'spamspam'

'spam' \* 3

*Answer: spam print thrice. Screenshot below for reference.*



8. Why is eggs a valid variable name while 100 is invalid?

*Answer: Rules for the variable name in python.*

* *A variable name must start with a letter or the underscore character.*
* *A variable name cannot start with a number*
* *Variable name eggs are valid*
* *Variable name 100 is invalid*

9. What three functions can be used to get the integer, floating-point number, or string version of a value?

Answer:

* *str()*
* *int()*
* *float()*

10. `

'I have eaten ' + 99 + ' burritos.'

*Answer: 99 is an integer and it cannot be concatenated. There are two ways to print the above statement.*

1. *Typecasting*
2. *Enter ‘f’ before the statement*

*Solution given in the below screenshot*

