

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.

*

'hello'

-87.8

-

/

+

6

Ans:

* => expression

'hello' => value

-87.8 => value

- => expression

/ => expression

+ => expression

6 => value

2. What is the difference between string and variable?

Ans:

A variable is usually a symbolic name assigned to a memory pointer/location which stores a specified value.

A string is a specific value which contains a single character or a succession of characters which can be stored within a given variable.

3. Describe three different data types.

Ans: Data types in Python fall under multiple types, 3 of which are described as follows:

Numeric Type: int, float

Sequence Type: list, tuple

Mapping Type: dict

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

Ans:

An expression is a combination of operators and operands that is interpreted to produce some other value.

Expressions are used to evaluate the final value of a given operation based on the operators and the variables provided in the given expression.

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

Ans:

A statement here is used to store a given value in the variable specified. Here the value of spam is defined as 10. It must be noted that the execution of a statement does return any value.

An expression is used to evaluate the final value after performing a set of operations defined within it. It must be noted that execution of an expression does indeed return a value.

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

```
bacon = 22
```

```
bacon + 1
```

Ans:

```
bacon = 23
```

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

'spam' + 'spamspam'

'spam' * 3

Ans:

'spam' + 'spamspam' => 'spamspamspam'

'spam' * 3 => 'spamspamspam'

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

Ans:

Any numeric value cannot be assigned as a variable name as it has a predefined meaning (i.e., the absolute value of the number 100 in this case) as it would confuse the interpreter. However if it is ensured that the first character of the variable isn't a numeral, numbers can be used in a variable name. E.g., egg1

On the other hand, a string can be assigned as a variable name as it does not hold any predefined meaning to the interpreter.

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

Ans:

int()

float()

str()

10. *Why does this expression cause an error? How can you fix it?*

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

Ans:

The expression causes an error as a string concatenation cannot be operated upon a string and a numeral. It has to be between multiple strings.

The fix would be:

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