

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:

- a) * Is an expression
- b) 'hello' is a value.
- c) -87.8 is a value.
- d) – is an expression
- e) / Is an expression
- f) + is an expression.
- g) 6 is a value.

2. What is the difference between string and variable?

Ans: A string is a value like a person's name which is a sequence of characters. A variable is a container that can store a value like string or integer or array or float number or Boolean. String is also a term given to datatype.

3. Describe three different data types.

Ans: Integer- They are all the whole numbers which does not include any decimal points. They include positive, negative and zero.

String: String data type are a sequence of characters(text) which are usually in quotation marks.

Boolean: It include two values True or False. These are basically condition.

Float: This data type include decimal numbers eg: 6.451

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

Ans: Expressions are basically characters like * / + and numbers. They are used for mathematical operations.

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

Ans: A expression is simple an mathematical operation which will give a output eg: `7+8`, but a statement like `spam =10` is used to assign values to a variable or to perform any task.

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

```
bacon = 22
```

```
bacon + 1
```

Ans: the variable `bacon` contains value 22, because `bacon+1` will give output 23 but it wont change any the value in `bacon`.

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

```
'spam' + 'spamspam'
```

```
'spam' * 3
```

Ans: Both statement will give same output that is '`spamspamspam`'"

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

Ans: `100` is a numerical value which by itself cannot be a variable, a variable can be defined with first letter as alphabets or underscore.

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

Ans: `int()`, `float()` & `str()` can be used to the respective task.

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

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

Ans: Its because `99` is a integer and other two are strings. It can be fixed by following two methods:

a) `'I have eaten ' + '99' + ' burritos.'`

b) `'I have eaten ' + str(99) + ' burritos.'`