

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.

* - Expression to identify the comments in the code

'hello' - It is a string value

-87.8 - Integer Value

- - Mathematical operator Minus

/ - Divisional Operator

+ - Additional Operator

6 - Integer Value

2. What is the difference between string and variable?

String is a sequence of characters can be written in single quote or double quote. String is also a data type.

String will always be on the right side of the given equation

Variable is name assigned to a value either it can an integer or string.

Variable names can't start with a number but can be a combination of letters and number.

Variable will always be on the left side of the equation.

3. Describe three different data types.

Integer denoted by int

Floater value denoted by float

String value denoted by str

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

An expression is a mathematical operation which takes minimum of two values for performing various arithmetic, relations & logical operations. The output value can be assigned to a variable to print or use it for further purpose.

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

Here `spam` is variable name and the expression of `spam=10` denotes or assigns a value of '10' to the variable `spam`.

Finally the statement is `spam` is equivalent to 10.

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

```
bacon = 22
```

```
bacon + 1
```

23

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

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

'spamspamspam'

```
'spam' * 3
```

'spamspamspam'

Both values are same .

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

`eggs` is neither a string or a key word in python so it can be easily used as a variable name, whereas `100` is an integer value so it can't be used as a variable.

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

`int(value)`, `float(value)`, `str(value)`

As per the example no.6: `bacon+1=23`

`Int(bacon+1)` will be 23

`Float(bacon+1)` will be 23.0

`Str(bacon+1)` will be '23'

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

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

Error Type: `can only concatenate str (not "int") to str`

One string can be concatenated with other string but not with an integer. To fix this we can covert the integer value of 99 to string and then go with running the above given expression.

Answer would be: `'I have eaten 99 burritos.'`