

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

'hello' - Value

-87.8 - Value

- - Expression

/ - Expression

+ - Expression

6 - Value

2. What is the difference between string and variable?

Ans :- **Variable** is symbol used to stored some data or information. **String** is data which is stored in variable.

For Ex. $Z = X^2 + Y^2$

Where Z is variable and $X^2 + Y^2$ is string

3. Describe three different data types.

Ans :-

1.Numeric : data which contain numeric value which can be integer & floating number.

2.Set : It is an unordered collection of data type which is mutable, iterable and no duplicate element.

3.Dictionary :- It stored a data in Key-value manner.

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

Ans :- Expression is a combination of operators, constants and variables. It's used for evaluate the value of expression.

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

Ans:-

`spam = 10` is statement because it doesn't change any output value

`All mail = primary + spam` is expression because it can change output value

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

`bacon = 22`

`bacon + 1`

Ans :-

```
In [29]: bacon = 22
         bacon + 1
Out[29]: 23

In [ ]: 
```

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

`'spam' + 'spamspam'`

`'spam' * 3`

Ans :-

```
In [30]: 'spam' + 'spamspam'
         'spam' * 3
Out[30]: 'spamspamspam'

In [ ]: 
```

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

Ans :- variable should not be a number.

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

Ans:-

Integer :- `int()`

String :- `str()`

Floating :- `float()`

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

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

Ans:-

You have to put everything into single string for output as shown below.

```
In [34]: 'I have eaten 99 burritos.'
```

```
Out[34]: 'I have eaten 99 burritos.'
```