

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

**Answer:**

**Values – 'hello', -87.8, 6**

**Expressions - \*, -, +, /**

2. What is the difference between string and variable?

**String is a value that is enclosed within quotes. A string can be letters or numbers or even combinations of letters and numbers.**

**Variable is the one in which values are stored. A variable can hold different type of values like string, numbers, or even files.**

3. Describe three different data types.

**String is a value that is enclosed within quotes. A string can be letters or numbers or even combinations of letters and numbers.**

**Int is a numeric data type which is of whole numbers.**

**Float is a numeric data type with decimal numbers. e.g.: 1.0, 1.23.**

**Sequence data types – List, tuples are sequence types within which multiple values can be stored.**

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

**Expression is a combination of values, variables, and operators. It needs to be evaluated and stored in a variable to print the result. E.g.:  $x = x + 10$ .**

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

**Assignment is the process in which (=) is used to assign a value, or the result from an expression. `A = 10`.**

**Expression is a combination of values, variables, and operators. E.g.: `x ++`**

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

```
bacon = 22
```

```
bacon + 1
```

**Answer: 22, the `bacon + 1` is not assigned to `bacon` variable.**

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

```
'spam' + 'spamspace'
```

```
'spam' * 3
```

**Answer: Same output, `spamspace`**

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

**A variable name has a set of predefined rules with which it should be named. A variable name must start with an alphabet or an underscore.**

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)`.**

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

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

**This is an error. A string cannot be concatenated with a number.**

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

**You can also use `str(99)`.**

