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:**

|  |  |
| --- | --- |
| **Element** | **Type** |
| \* | Expression |
| 'hello' | Value |
| -87.8 | Value |
| - | Expression |
| / | Expression |
| + | Expression |
| 6 | Value |

2. What is the difference between string and variable?

**ANSWER:**

We can store any information in a variable. String is just a type of information that we can store in a variable. It is usually words.

3. Describe three different data types.

**ANSWER:**

|  |  |  |
| --- | --- | --- |
| **Data Type** | **Used for** | **Example** |
| Integer | Whole numbers | 1,39,777 |
| Float | Number with a decimal point | 3.5,-0.001,363.99 |
| Boolean | Representing logical values | TRUE, FALSE |

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

**ANSWER:**

An Expression is made up of operators and operands that is interpreted to produce some other value.

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

**ANSWER:**

An expression is a instruction to be executed that returns a value (even a void ). A statement is used to form the sequence of a program (e.g. if-then ; while, for statements). A statement can be simple or complex and can contain 0 or more expressions.

Expressions are statements as well.

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

bacon = 22

bacon + 1

**ANSWER:**

23

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

'spam' + 'spamspam'

'spam' \* 3

**ANSWER:**

spamspamspam

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

**ANSWER:**

We can assign any value to ‘eggs’, while 100 is a value (int) itself and we cannot use it as a variable. Variable cannot start with a number but can start with a letter or an underscore.

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

**ANSWER:**

int

float

str

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

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

**ANSWER:**

We cannot concatenate string to a integer.

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

Or

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