

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.

* : expressions

'hello' : values

-87.8 : values

- : expressions

/ : expressions

+ : expressions

6 : values

2. What is the difference between string and variable?

String is one of many datatypes and it can hold/stored inside variable.

3. Describe three different data types.

String, Integer, Float, Boolean.

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

expression is a combination of one or more values, operators, and functions that can be evaluated to produce a result. They're fundamental building blocks in programming, and they serve various purposes depending on their context like calculations, assignments, decision-making, and data manipulation.

Variable holds data.

operators perform operations on one or more value.

It does computation, assignments, control flow, filtering and selections, functional calls.

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

Expression is a piece of code that produces a value. In above case spam = 10 is a statement, 10 is expression.

But spam = 10/2 then 10/2 is an expression, though the entire spam = 10/2 is a statement.

Expressions have values, while statements do not. Statements are used to perform actions, control program flow, or define the structure of your code.

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

```
bacon = 22
```

```
bacon + 1
```

bacon value will change to 23.

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

```
'spam' + 'spamspam' : 'spamspamspam'
```

```
'spam' * 3 : 'spamspamspam'
```

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

Variable names can contain numbers, but you can't start with numbers or use just number for variable name.

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

```
int, float, str
```

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

```
'I have eaten ' + 99 + ' burritos.' : can only concatenate str (not "int") to str
```

```
print(f"I have eaten {99} burritos.")
```