

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' **VALUES**

-87.8 **VALUES**

- **EXPRESSION**

/ **EXPRESSION**

+ **EXPRESSION**

6 **VALUES**

2. What is the difference between string and variable?

Ans: Variable acts as a value holder, or where we usually store value. Value could be anything for example: integers, float or string. And the string is one of the data types which consists of characters enclosed in single or double quotes. For multi-line string, we need 3 quotes.

For example:

var_1 = 5

var_2 = "Hello"

Here var_1 and var_2 is variable and 5 is a value stored in var_1. "Hello" is a string stored in var_2

3. Describe three different data types.

Ans:

Integer: Data type which is whole numbers. Like: 1, 2, 3, 4....

Float: Data type which is decimal numbers. Like: 1.23, 2.55, 0. 3, 4.18 etc.

String: Data type which consists of characters. Like: Hello, address_1 etc.

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

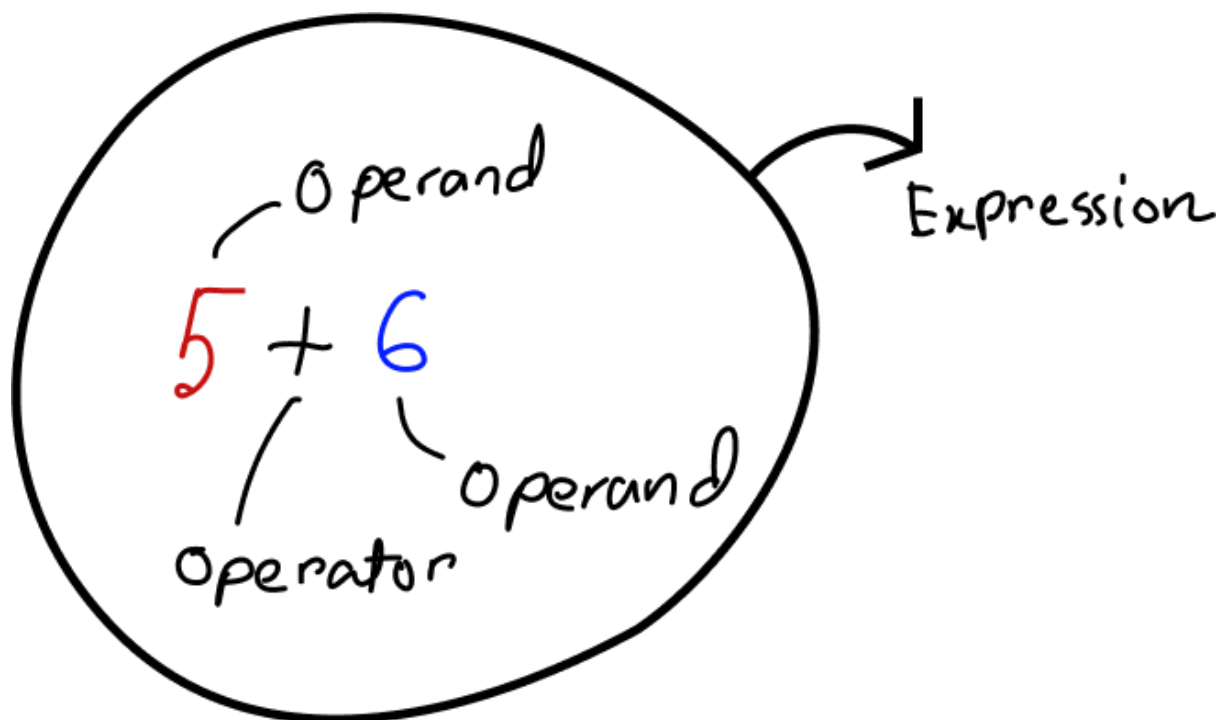
Ans:

Expressions are made of two components:

1. Operators

2. Operands

Let's see an example:



Expressions are helpful for expressing any physical phenomenon mathematically. Help to perform any arithmetic operations, compute values etc.

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

Ans: Expression is sometimes used with statements and statements are used to perform any actions.

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

```
bacon = 22
```

```
bacon + 1
```

Ans: 22

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?

Ans: According to the rules for writing variable names, A variable name could start with any alphabet but can't start with numbers. So, in such a case 100 is invalid but eggs will be a valid variable name.

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

Ans:

int(): To get an integer representation of the value

float(): To get a decimal representation of the value

str(): To get a string representation of the value

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

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

Ans: Concatenating a string with a non-string value directly can result in a type mismatch error.

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