

1. What are the differences between operators and values in the following?

\*

'hello'

-87.8

-

/

+

6

Ans) operators:

**\*** = used to do multiply operation;

**-** = used to do subtract operation;

**+** = used to do addition operation;

**/** = used to do division operations;

**'Hello'** = It is a string.

**6** = It is an integer value.

2. What is the difference between string and variable?

spam

'spam'

Ans) spam is a variable which is used for memory location that can hold values of a specific type.

Where "spam" is a string. We can store this string in a variable spam. Then it became string variable.

spam="spam"

3. Describe three different data forms.

Ans)

1. Qualitative and Quantitative.

Which represents categorical type data.

2. Continuous and Discrete Data and  
Which represents numerical type data.
3. Primary and Secondary Data.  
Data which is collected by you or on your behalf and used for operations is called primary data.  
Data which is used by some other person is called Secondary data.

#### 4. What makes up an expression? What are the functions of all expressions?

Ans)

- An expression is a combination of values, variables, operators, and constants. An expression may consist of **one or more** operands, and **zero or more** operators to generate an output.
  1. **Constant expressions:** It consists of only constant values.
  2. **Integral expressions:** which produce integer results.
  3. **Floating expressions:** which produce floating point results.
  4. **Relational expressions:** That yield results of type bool which takes a value true or false.
  5. **Logical expressions:** Combine two or more relational expressions and produces bool type results.

5. In this chapter, assignment statements such as `spam = 10` were added. What's the difference between a declaration and an expression?

Ans) Declaration means binding a value to variable like `spam = 10`.

Expression means doing some operations on this variable.

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'`

`'spam' * 3`

Ans) spamspamspam, spamspamspam.

8. Why is it that eggs is a true variable name but 100 is not?

Ans) Because variable cannot start with number.

9. Which of the following three functions may be used to convert a value to an integer, a floating-point number, or a string?

Ans) `int()`, `float()`, and `str()` are functions used to convert a value to an integer, a floating-point number, or a string

10. What is the error caused by this expression? What would you do about it?

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

Ans) `TypeError: can only concatenate str (not "int") to str.`

I will convert that integer into string

`'I have eaten ' + str(99) + ' burritos'` or

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