**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.**

|  |  |  |
| --- | --- | --- |
| **S. No.** | **Item** | **Expression or Value** |
| 1. | \* | Expression |
| 2. | ‘hello’ | Value |
| 3. | -87.8 | Value |
| 4. | - | Expression |
| 5. | / | Expression |
| 6. | + | Expression |
| 7. | 6 | Value |

**2. What is the difference between string and variable?**

String: is a DATA Type where character type value is stored in a variable.

Eg: name = “Jack”

Variable: is identifier wherein the particular value is stored.

X= 10 # here X is a variable where we stored a value 10.

**3. Describe three different data types.**

1. **Integer written as int**.: It is a data type that stores integer or numeric value of whole no., negative or positive.

e.g.: x=10

2. **float** : It is data type wherein the numeric value of decimal or fraction, negative or positive are stored. It is real no.

e.g.: p = 3.14

3. **String**: It is data type wherein the variable store character value. It is always mentioned in double quotes.

e.g: name = “krish”

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

**Ans.** Expression is made up of an variable, operators and an operand. Expression after process or interpretation return some value.

E.g: x = 10 + 25 # It is expression. Where it has operator ‘+’, and after processing it return the value 35.

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

**Ans.** Expression is used to generate some value using calculation after being processed by the interpretor.

e.g: x= 23 + 5

print(x)

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While Statement is used to create or assign value to variable. It does not return any value.

X = 10

Print(x)

10

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

**bacon = 22**

**bacon + 1**

**Ans.** After running, bacon will only contain 22, as no new value has been reassigned to it. Only 1 is added but its value is not changed.

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

**'spam' + 'spamspam'**

**'spam' \* 3**

**Ans.** ‘Spam’ + ‘spamspam’ ‘spamspamspam’

‘spam’ \* 3 ‘spamspamspam’

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

**Ans.** As per the naming convention of variable or identifiers, it can contain numbers 0-9, lower case a-z or Upper case A-Z or underscore \_, but it cannot start with a numeric digit.

Therefore eggs is valid variable name whereas 100 is NOT.

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

**Ans.** Integer – int() , floating-point number – float(), string- str()

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

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

**Ans.** Expression is causing an error because we are connecting string with integer.

Here 99 is integer and other are string.

So correct expression is :

“I have eaten” + str(99) + ‘burritos’