

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' = Value.

-87.8 = Value.

- = Expression.

/ = Expression.

+ = Expression.

6 = Value.

2. What is the difference between string and variable?

A String is a group or sequence of characters enclosed between quotation marks. E.g.: - "My name is Akshay Barfe".

A Variable is a location in memory that contains/holds a certain value. The value could be an integer, floating-point number or a string.

E.g.: - x=1

y = x+x

print(y)

Answer: - 2.

3. Describe three different data types.

A String (data type) is a group or sequence of characters enclosed between quotation marks. E.g.: - "My name is Akshay Barfe".

An Integer data type is a whole number without a fractional part. E.g.: - 0, 100, -10.

A Floating-point data type represents a real number with a decimal point separating the integer and the fractional part. E.g.: - 67.40, 37.4, 6.5.

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

Expressions include values and operators and always evaluate down to a single value.

E.g.: - 2+2

Answer: - 4.

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

Expressions can be reduced to a single value. Statements can be executed i.e.; an action can be performed. E.g.: - a print statement.

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

bacon = 22

bacon + 1

After the above code has been executed, the variable bacon holds value of 22.

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

'spam' + 'spamspam'

'spam' * 3

After code execution,

1. **Answer: - “spamspamspam”. String concatenation.**
2. **Answer: - “spamspamspam”. Previous string repeated 3 times after multiplication.**

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

A Variable name in Python must start with a letter or the “_” character. It cannot start with a number.

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

int(), float() and str().

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

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

String concatenation adds/combines 2 or more strings to each other. It can't add/combine a string and integer datatype.

“I have eaten” + “99” + “burritos.”