

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."**