

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.

*

'hello'

-87.8

-

/

+

6

Ans:

The following are the values.

'hello'

-87.5

6

The following are the expressions

'hello'

-87.5

6

*

-

/

+

2. What is the difference between string and variable?

Ans:

A string is a value representing text, denoted in quotes. A variable is a name that can refer to any value.

3. Describe three different data types.

Ans:

1. List
2. Dictionary
3. Tuple

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

Ans:

Expressions represent something, like a number, a string, or an instance of a class. Any value is an expression. More complex expressions actually evaluate things, like adding numbers. Using the word expression seems like it is making things more confusing. Expressions are nothing but values, except they can have operations like addition or subtraction.

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

Ans:

Spam is the statement and 10 is the expression.

Expressions represent something, like a number, a string, or an instance of a class. Any value is an expression. Anything that does something is a statement. Any assignment to a variable or function call is a statement. Any value contained in that statement in an expression.

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

```
bacon = 22
```

```
bacon + 1
```

Ans:

```
bacon = 23
```

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:

Variables cannot be an integer or float, as it cannot assign any values to it.

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

Ans:

```
int()
```

```
float()
```

```
str()
```

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

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

Ans:

We cannot add string and integer in an expression. We can convert the integer to string and add it or use a `f` string.