1. What are the Boolean data type's two values? How do you go about writing them?

**Answer: True** and **False** are the two values of the Boolean data type. Using capital T and F, with the rest of the word in lowercase

2. What are the three different types of Boolean operators?

**Answer: And**, **or** and **not**

3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate ).

**Answer:**

* Input Combination 1. – “False” – “False” or ( 0, 0 )
* Input Combination 2. – “False” – “True” or ( 0, 1 )
* Input Combination 3. – “True” – “False” or ( 1, 0 )
* Input Combination 4. – “True” – “True” or ( 1, 1 )

**And**

|  |  |  |
| --- | --- | --- |
| 0 | 0 | **0** |
| 0 | 1 | **0** |
| 1 | 0 | **0** |
| 1 | 1 | **1** |

**Or**

|  |  |  |
| --- | --- | --- |
| 0 | 0 | **0** |
| 0 | 1 | **1** |
| 1 | 0 | **1** |
| 1 | 1 | **1** |

4. What are the values of the following expressions?

**Answer:**

(5 > 4) and (3 == 5) - **False**

not (5 > 4) - **False**

(5 > 4) or (3 == 5) - **True**

not ((5 > 4) or (3 == 5)) - **False**

(True and True) and (True == False) - **False**

(not False) or (not True) - **True**

5. What are the six different types of reference operators?

**Answer:**

Python Assignment Operators.

Python Arithmetic Operators.

Python Comparison Operators.

Python Bitwise Operators.

Python Logical Operators.

Python Operator Precedence.

6. How do you tell the difference between the equal to and assignment operators?

**Answer:**

= operator: [The “**=**” is an](https://www.geeksforgeeks.org/operators-c-c/) [assignment operator](https://www.geeksforgeeks.org/assignment-operators-in-c-c/) is used to assign the value on the right to the variable on the left.

== operator: It is a relational or comparison operator. It is used for comparing two values. It returns 1 if both the values are equal otherwise returns 0.

7. Describe a condition and when you would use one.

**Answer:**

A condition is an expression used in a flow control statement that evaluates to a Boolean value.

8. Recognize the following three blocks in this code:

spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

print('spam')

**Answer:**

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

print('spam')

9. Create a programme that prints. If 1 is stored in spam, prints Hello; if 2 is stored in spam, prints Howdy; and if 3 is stored in spam, prints Salutations! if there's something else in spam.

**Answer:**

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

10.If your programme is stuck in an endless loop, what keys can you press?

**Answer:** Press CTRL-C to stop a program stuck in an infinite loop.

11. How can you tell the difference between break and continue?

**Answer:**

The break statement will move the execution outside and just after a loop. The continue statement will move the execution to the start of the loop.

12. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

**Answer:**

The range(10) call ranges from 0 up to (but not including) 10,

range(0, 10) explicitly tells the loop to start at 0, and

range(0, 10, 1) explicitly tells the loop to increase the variable by 1 on each iteration.

13. Using a for loop, write a short programme that prints the numbers 1 to 10 Then, using a while loop, create an identical programme that prints the numbers 1 to 10.

**Answer:**

for i in range(1, 11):

print(i)

and:

i = 1

while i <= 10:

print(i)

i = i + 1

14. If you had a bacon() function within a spam module, how would you call it after importing spam?

**Answer:**

This function can be called with spam.bacon().