**1.What are the two values of the Boolean data type? How do you write them?**

Answer:

The Python Boolean type has only two possible values:

1. True
2. False

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

**Answer:**

There are three logical operators that are used to compare values. They evaluate expressions down to Boolean values, returning either True or False . These operators are

1. and ,

2. or , and

3. not and.

**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:**

|  |
| --- |
| False and False is False. |
| False and True is False. |
| False or False is False. |
| False or True is True. |
| not False is True. |
| not True is False. |
| True and False is False. |
| True and True is True. |
| True or False is True. |
| True or True is True. |

**4. What are the values of the following expressions?**

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

**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 comparison operators?**

**Answer:**

|  |  |
| --- | --- |
| 1 | == |
| 2 | != |
| 3 | < |
| 4 | > |
| 5 | <= |
| 6 | >= |

**6. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.**

**Answer:**

== is the equal to operator that compares two values and evaluates to a Boolean, while = is the assignment operator that stores a value in a variable.

**7. Identify the 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:**

The three blocks are inside the if statement are   
1. print('eggs')  
2. print('bacon')  
3. print('ham')

**8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.**

**Answer:**

if spam == 1:

print('Hello')

elif spam == 2:

print('Howdy')

else:

print('Greetings!')

**9.If your programme is stuck in an endless loop, what keys you’ll press?**

**Answer:**

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

**10. 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.

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

**Answer:**

They all do the same number of looping.

* The range(10) call ranges from 0 up to (but not including) 10
* range(0, 10) explicitly tells the loop to start at 0
* range(0, 10, 1) explicitly tells the loop to increase the variable by 1 on each iteration.

**12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.**

**Answer:**

|  |
| --- |
| for i in range(1, 11):  print(i) |
| i = 1  while i <= 10:  print(i)  i = i + 1 |

**13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?**

**Answer:**

This function can be called as

spam.bacon()