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

Answer: **True and False, 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:

|  |  |  |
| --- | --- | --- |
| True | OR True | True |
| True | OR False | True |
| False | OR True | True |
| False | OR False | False |
| True | And True | True |
| True | And False | False |
| False | And True | False |
| False | And False | False |

**not True is False.  
  
not False is True.**

4. What are the values of the following expressions?

(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: **==, !=, <, >, <=, and >=**.

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 everything inside the if statement and the lines print('bacon') and print('ham').  
  
print('eggs')  
if spam > 5:  
print('bacon')  
else:  
print('ham')  
print('spam')**

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:

**The code:  
  
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:

|  |  |
| --- | --- |
| **Break Statement** | **Continue Statement** |
| **The break statement is usually used with the switch statement, and it can also use it within the while loop, do-while loop, or the for-loop.** | **The continue statement is not used with the switch statement, but it can be used within the while loop, do-while loop, or for-loop.** |

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

Answer:

**Range(10) it represent range(stop), start is consider as 0 by default and stop is 10**

**Range(0, 10) is represent range(start, stop), start in this range is 0 and stop is 10. It will iterate from 0->10**

**Range(0, 10, 1) is represent range(start, stop, step) start is in range is 0 and stop is 10 will go from start to stop with difference is 1.**

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:

Print 1 to 10 using for loop.

**for i in range(11):**

**print(i)**

Print 1 to 10 using while loop,

**i = 1**

**(i<=10):**

**print(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**: function can be called with spam.bacon()**