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

Truth and False or 0 ,1

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

‘and’, ‘or’ and ‘nor’

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **P** | **Q** | **AND** | **OR** | **NOR** |
| **(∧)** | **(∨)** | **(~∨)** |
| T | T | T | T | F |
| T | F | F | T | F |
| F | T | F | T | F |
| F | F | F | F | T |

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):

**5.What are the six comparison operators?**

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.**

= is the assignment operator

== is equal

Eg: a=200 is -> assignment operator

If 12==12 is equal

**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')**

spam = 11

if spam == 10:

print('eggs') -🡪 Block 1

if spam > 5:

print('bacon')-🡪 Block 2

else:

print('ham')

print('spam')

print('spam')🡪 Block3

**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.**

spam = 0

if spam == 1:

print('Howdy')

elif spam == 2:

print('Greetings!')

else:

print('hello')

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

Cnt+C

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

The break statement terminates the whole iteration of a loop whereas continue skips the current iteration

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

Range(10) iterate loop from 0 to 9 or 0,1,2,3,4,5,6,7,8,9

Range(0,10) iterate loop from 0 to 9, like 0,1,2,3,4,5,6,7,8,9

Range(0,10,1) iterate from 0 up to 9 with increment 1 like 0,1,2,3,4,5,6,7,8,9

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

for i in range (0,10,1):

print(i)

i = 1

while(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?