

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

True and False.

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

and, or & 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 evaluates).

AND Truth Table,

X	Y	Returns
True	False	False
False	True	False
False	False	False
True	True	True

OR Truth Table,

X	Y	Returns
True	False	True
False	True	True
False	False	False
True	True	True

NOT Truth Table,

X	Returns
not True	False
not False	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?

`>`, `>=`, `<`, `<=`, `==`, `%`

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

Assignment operators are used to assign a particular value to a variable. E.g.: - `x = 2`

Equal to operator compares/checks a value with another value.

E.g.: - `if x == 2:`

```
    print("Correct!")
```

```
else:
```

```
    print("Wrong!")
```

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: -

```
spam = 0
```

```
if spam == 10:
```

```
print('eggs')

if spam > 5:

    print('bacon')

else:

    print('ham')

print('spam')

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.

```
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?

CTRL + C

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

break statement will terminate execution of current loop. continue statement will skip current iteration of a loop and executes the very next.

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

For all the above-mentioned range functions, the for loop will be executed 10 times i.e., from 0 to 9.

E.g.: -

```
for i in range(10):
```

```
    print("Hello!")
```

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.

FOR LOOP	WHILE LOOP
<pre>for n in range(1, 11): print(n)</pre>	<pre>n = 0 while n < 10: n += 1 print(n)</pre>

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

from spam import bacon

bacon()