1. **What are the two values of the Boolean data type? How do you write them?**
   * The two values of the Boolean data type are True and False. They are written as True and False with an uppercase first letter in Python.
2. **What are the three different types of Boolean operators?**
   * The three Boolean operators are:
     1. and
     2. or
     3. 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 to).**
   * **AND (and) operator:**

| **A** | **B** | **A and B** |
| --- | --- | --- |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

* + **OR (or) operator:**

| **A** | **B** | **A or B** |
| --- | --- | --- |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

* + **NOT (not) operator:**

| **A** | **not A** |
| --- | --- |
| True | False |
| False | True |

1. **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
2. **What are the six comparison operators?**
   * == (equal to)
   * != (not equal to)
   * > (greater than)
   * < (less than)
   * >= (greater than or equal to)
   * <= (less than or equal to)
3. **How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.**
   * The = operator is the assignment operator, used to assign values to variables.
   * The == operator is the comparison operator, used to compare two values.
   * Example:
   * x = 5 # Assignment operator
   * if x == 5: # Comparison operator
   * print("x is equal to 5")
4. **Identify the three blocks in this code:**
5. spam = 0
6. if spam == 10:
7. print('eggs')
8. if spam > 5:
9. print('bacon')
10. else:
11. print('ham')
12. print('spam')
13. print('spam')
    * Block 1: if spam == 10:
    * Block 2: if spam > 5:
    * Block 3: else:
14. **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.**
15. spam = int(input("Enter a number: "))
16. if spam == 1:
17. print("Hello")
18. elif spam == 2:
19. print("Howdy")
20. else:
21. print("Greetings!")
22. **If your program is stuck in an endless loop, what keys you’ll press?**
    * Press Ctrl + C to stop the program.
23. **How can you tell the difference between break and continue?**

* break exits the loop completely.
* continue skips the current iteration and moves to the next one.

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

* range(10): Starts from 0 and goes up to 9.
* range(0, 10): Explicitly starts from 0 and goes up to 9.
* range(0, 10, 1): Starts from 0, increments by 1, and goes up to 9.

1. **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.**

# Using for loop

for i in range(1, 11):

print(i)

# Using while loop

i = 1

while i <= 10:

print(i)

i += 1

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

import spam

spam.bacon()