

1. What are the two values of the Boolean data type? How do you write them?
2. What are the three different types of Boolean operators?
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).
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)
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.
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')
```
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.

1. The two values of the Boolean data type are True and False, and they are written exactly as shown here, with the first letter capitalized.
2. The three Boolean operators are AND, OR, and NOT.
- 3.

AND truth table: True AND True = True True AND False = False False AND True = False False AND False = False

OR truth table: True OR True = True True OR False = True False OR True = True False OR False = False

NOT truth table: NOT True = False NOT False = True

- 4.

(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. The six comparison operators are:

- Greater than (>)
- Less than (<)
- Greater than or equal to (>=)
- Less than or equal to (<=)
- Equal to (==)
- Not equal to (!=)

6. The equal to operator (==) is used to compare two values to see if they are equal, whereas the assignment operator (=) is used to assign a value to a variable. For example, if you wanted to assign the value of 5 to a variable named x, you would write "x = 5". If you wanted to check if x was equal to 5, you would write "x == 5".

7. The three blocks in the code are:

- spam = 0
- if spam == 10: print('eggs')
- if spam > 5: print('bacon') else: print('ham') print('spam') print('spam')

8.

bash

```
if spam == 1:
    print("Hello")
elif spam == 2:
    print("Howdy")
else:
    print("Greetings!")
```