Practice Quiz: Conditionals

Total points 5

Question 1

What's the value of this Python expression: (22) == 4?** **1 / 1 point**

4

2**2

True

False

Correct

You nailed it! The conditional operator == checks if two values are equal. The result of that operation is a boolean: either True or False.

Question 2

Complete the script by filling in the missing parts. The function receives a name, then returns a greeting based on whether or not that name is "Taylor". **1 / 1 point**

```
1   def greeting(name):
2       if name == "Taylor":
3            return "Welcome back Taylor!"
4       else:
5            return "Hello there, " + name
6
7   print(greeting("Taylor"))
8   print(greeting("John"))
```

Welcome back Taylor!
Hello there, John

Correct

Great work! You're getting the hang of conditionals in Python.

Question 3

What's the output of this code if number equals 10? **1 / 1 point**

```
if number > 11:
    print(0)
elif number != 10:
    print(1)
elif number >= 20 or number < 12:
    print(2)
else:
    print(3)
```

2

Correct

Right on! Our number is 10, which is smaller than 12, so it matches that condition.

Question 4

Is "A dog" smaller or larger than "A mouse"? Is 9999+8888 smaller or larger than 100*100? Replace the plus sign in the following code to let Python check it for you and then answer. **1 / 1 point**

```
print("A dog" < "A mouse")
print(9999+8888 > 100*100)
```

True
True

"A dog" is larger than "A mouse" and 9999+8888 is larger than 100*100

*"A dog" is smaller than "A mouse" and 9999+8888 is larger than 100*100*

"A dog" is larger than "A mouse" and 9999+8888 is smaller than 100*100

"A dog" is smaller than "A mouse" and 9999+8888 is smaller than 100*100

Correct

You got it! Keep getting Python to do the work for you.

Question 5

If a filesystem has a block size of 4096 bytes, this means that a file comprised of only one byte will still use 4096 bytes of storage. A file made up of 4097 bytes will use 4096*2=8192 bytes of storage. Knowing this, can you fill in the gaps in the calculate_storage function below, which calculates the total number of bytes needed to store a file of a given size? **1 / 1 point**

```
1   def calculate_storage(filesize):
2       block_size = 4096
3       # Use floor division to calculate how many blocks are fully occupied
4       full_blocks = filesize//block_size
5       # Use the modulo operator to check whether there's any remainder
6       partial_block_remainder = filesize%block_size
7       # Depending on whether there's a remainder or not, return
8       # the total number of bytes required to allocate enough blocks
9       # to store your data.
10      if partial_block_remainder > 0:
11            return (full_blocks+1)*4096
12      return (full_blocks)*4096
13
14  print(calculate_storage(1)) # Should be 4096
15  print(calculate_storage(4096)) # Should be 4096
16  print(calculate_storage(4097)) # Should be 8192
17  print(calculate_storage(6000)) # Should be 8192
```

```
4096
4096
8192
8192
```

Correct

Awesome! Those were some complicated calculations that you needed to do, but you did it!