Lesson 2 Homework: Arithmetic, Comparison, Logical, and Assignment Operators

Part 1: Definitions

Write the definitions of the following concepts in your own words.

Arithmetic Operators

Definition:

Comparison Operators

Definition:

Logical Operators

Definition:

Assignment Operators

Definition:

Part 2: Coding Exercises

Solve the following exercises by writing the correct code beneath each instruction.

Exercise 1: Arithmetic Operations

Given two numbers, x and y, calculate the following:

```
x = 10
v = 4
```

Determine the **sum** of `x` and `y` and print it.
Determine the **difference** between `x` and `y` and print it.
Determine the **product** of `x` and `y` and print it.
Determine the **floor division** result of `y` divided by `x` and print it.

Exercise 2: Comparison Operations

Given two numbers, `a` and `b`, use comparison operators to check the following:

```
a = 8
b = 15
```

Is `a` **greater** than `b`? Print the result (`True` or `False`).
Is `a` **equal** to `b`? Print the result (`True` or `False`).
Is `b` **greater than or equal** to `a`? Print the result (`True` or `False`).

Exercise 3: Logical Operations

Given two conditions, `is_raining` and `is_windy`, determine the following using logical operators:

```
is_raining = True
is_windy = False
```

Should we **stay inside** if it is both raining and windy? *(Use AND operator)*
Can we **go for a walk** if it is either raining or windy? *(Use OR operator)*
Is it **not raining** ? *(Use NOT operator)*

Exercise 4: Assignment Operators

Given a variable `c`, use assignment operators to perform the following operations:

```
c = 5
```

Add `10` to `c` using an assignment operator and print the new value.
Subtract `3` from `c` using an assignment operator and print the new value.
Multiply `c` by `2` using an assignment operator and print the new value.
Divide `c` by `4` using an assignment operator and print the new value.

Exercise 5: Create Your Own Function

Write a Python function called `fizz_buzz` that takes an integer `n` as

input.

If `n` is **divisible by both 3 and 5** , print **"FizzBuzz"** .
If `n` is **divisible only by 3** , print **"Fizz"** .
If `n` is **divisible only by 5** , print **"Buzz"** .
Otherwise, print the value of `n`.

Example Output:

```
Input: 15 → Output: FizzBuzz
Input: 9  → Output: Fizz
Input: 10 → Output: Buzz
Input: 7  → Output: 7
```

Test the function with different values of `n`.

Submission Instructions:

Complete all parts of the assignment.
Save your script and submit it as a `.py` file.
Ensure your code runs without errors.

Good luck, and happy coding! 🚀