Basic JavaScript Exercises

Basic Arithmetic Exercises

In the following exercises declare all your variables with `const` unless you are told otherwise

1. **Adding Two Numbers** Create two variables: `num1` with a value of 8 and `num2` with a value of 15. Write a JavaScript statement to add these two numbers and use `console.log` to print the sum.

2. **Subtracting Numbers** Create two variables: `a` with a value of 30 and `b` with a value of 12. Subtract `b` from `a` and use `console.log` to print the result.

3. **Multiplying Numbers** Create two variables: `x` with a value of 7 and `y` with a value of 3. Write a JavaScript statement to multiply `x` and `y`, and use `console.log` to print the product.

4. **Dividing and Finding the Remainder** Create two variables: `dividend` with a value of 20 and `divisor` with a value of 4. Divide `dividend` by `divisor` and print the quotient. Then, find the remainder when `dividend` is divided by `divisor` and print it using `console.log`.

5. **Average of Three Numbers** Create three variables: `number1` with a value of 15, `number2` with a value of 25, and `number3` with a value of 10. Calculate the average of these three numbers and use `console.log` to print the average.

6. **Modulo Operator Basics**:

    - Explain what the modulo operator (`%`) does in JavaScript. Provide a simple code example where you calculate the remainder of dividing a variable `x` by `3` and display the result.

7. **Even or Odd Detector**:

    - Write a JavaScript program that takes a number and uses the modulo operator to determine if it's even or odd. Display a

message indicating the result.

8. **Divisibility Check**:
    - Create a program that checks if a given number is divisible by both `5` and `7`. Use the modulo operator for this task and provide a message based on the outcome.
9. **Counting by Steps**:
    - write a program that counts from `1` to `20`, but only displays the numbers that are divisible by `4` using the modulo operator.
10. **Logical AND Operator:**
    - Create a JavaScript program that checks if a number is both greater than `10` and less than `20`. Use logical AND (`&&`) operator for this task. Print a message indicating whether the number satisfies the condition.
11. **Logical OR Operator:**
    - Write a JavaScript program that checks if a number is either less than `-5` or greater than `10`. Use the logical OR (`||`) operator for this task. Print a message indicating whether the number satisfies the condition.
12. **Logical NOT Operator:**
    - Develop a JavaScript program that takes a boolean value (`true` or `false`) and uses the logical NOT (`!`) operator to print the opposite boolean value.
13. **Combining Logical Operators:**
    - Create a JavaScript program that checks if a number is greater than `5` and less than `10`, or if it is greater than `20` and less than `30`. Use a combination of logical AND (`&&`) and logical OR (`||`) operators for this task. Print a message indicating whether the number satisfies any of the conditions.