1. Arithmetic Operators (+, -, \*, /, %)

// Exercise 1: Add two numbers

let num1 = 5;

let num2 = 10;

let sum = num1 + num2;

console.log("Sum:", sum); // Output: Sum: 15

// Exercise 2: Subtract two numbers

let difference = num2 - num1;

console.log("Difference:", difference); // Output: Difference: 5

// Exercise 3: Multiply two numbers

let product = num1 \* num2;

console.log("Product:", product); // Output: Product: 50

// Exercise 4: Divide two numbers

let division = num2 / num1;

console.log("Division:", division); // Output: Division: 2

// Exercise 5: Find the remainder (modulus)

let remainder = num2 % num1;

console.log("Remainder:", remainder); // Output: Remainder: 0

2) Assignment Operators (=, +=, -=, \*=, /=, %=)

// Exercise 6: Using += operator

let num = 20;

num += 5; // Same as num = num + 5

console.log("After +=:", num); // Output: After +=: 25

// Exercise 7: Using -= operator

num -= 10; // Same as num = num - 10

console.log("After -=:", num); // Output: After -=: 15

// Exercise 8: Using \*= operator

num \*= 2; // Same as num = num \* 2

console.log("After \*=:", num); // Output: After \*=: 30

// Exercise 9: Using /= operator

num /= 3; // Same as num = num / 3

console.log("After /=:", num); // Output: After /=: 10

// Exercise 10: Using %= operator

num %= 4; // Same as num = num % 4

console.log("After %=:", num); // Output: After %=: 2

3) Comparison Operators(==, ===, !=, !==, >, <, >=, <=)

// Exercise 11: Check if two numbers are equal

let isEqual = (5 == '5');

console.log("5 == '5':", isEqual); // Output: true (loose equality)

// Exercise 12: Check strict equality

let isStrictEqual = (5 === '5');

console.log("5 === '5':", isStrictEqual); // Output: false (strict equality)

// Exercise 13: Check inequality

let isNotEqual = (5 != '5');

console.log("5 != '5':", isNotEqual); // Output: false

// Exercise 14: Check strict inequality

let isStrictNotEqual = (5 !== '5');

console.log("5 !== '5':", isStrictNotEqual); // Output: true

// Exercise 15: Compare greater than

let greaterThan = (10 > 5);

console.log("10 > 5:", greaterThan); // Output: true

// Exercise 16: Compare less than

let lessThan = (5 < 10);

console.log("5 < 10:", lessThan); // Output: true

// Exercise 17: Greater than or equal to

let greaterOrEqual = (5 >= 5);

console.log("5 >= 5:", greaterOrEqual); // Output: true

// Exercise 18: Less than or equal to

let lessOrEqual = (5 <= 5);

console.log("5 <= 5:", lessOrEqual); // Output: true

4) Logical Operators(&&, ||, !)

// Exercise 19: Using AND (&&) operator

let andResult = (5 > 3 && 10 > 5);

console.log("5 > 3 && 10 > 5:", andResult); // Output: true

// Exercise 20: Using OR (||) operator

let orResult = (5 > 3 || 10 < 5);

console.log("5 > 3 || 10 < 5:", orResult); // Output: true

// Exercise 21: Using NOT (!) operator

let notResult = !(5 > 3);

console.log("!(5 > 3):", notResult); // Output: false

5) Increment and Decrement Operators

Increment (++) and decrement (--)

// Exercise 22: Increment (++)

let count = 10;

count++;

console.log("After increment:", count); // Output: After increment: 11

// Exercise 23: Decrement (--)

count--;

console.log("After decrement:", count); // Output: After decrement: 10

6) Ternary (Conditional) Operator

Use the ternary operator to make quick decisions.

// Exercise 24: Ternary operator

let age = 18;

let isAdult = (age >= 18) ? "Yes, adult" : "No, not an adult";

console.log("Is adult?", isAdult); // Output: Yes, adult