JavaScript Advanced Practice Problems – Set 2

Instructions: Write functions in JavaScript to solve the following problems. Test your code with different inputs.

Problem 1: Factorial Calculator

Write a function `factorial(n)` that returns the factorial of a given number `n`.

Problem 2: Reverse a String

Write a function `reverseString(str)` that returns the reversed version of the input string.

Problem 3: Prime Checker

Write a function `isPrime(num)` that returns `true` if `num` is a prime number, otherwise `false`.

Problem 4: Count Vowels

Write a function `countVowels(str)` that counts and returns the number of vowels in a string.

Problem 5: Largest Number in Array

Write a function `largestNumber(arr)` that returns the largest number in an array.

Problem 6: Remove Duplicates

Write a function `removeDuplicates(arr)` that removes duplicate elements from an array and returns the new array.

Problem 7: Currency Formatter

Write a function `formatCurrency(amount)` that returns a string formatted as currency, e.g., `$1,234.00`.

Problem 8: Password Validator

Write a function `validatePassword(password)` that checks if a password: - Has at least 8 characters - Contains at least one uppercase letter

- Contains at least one number
Return `"Valid"` if all conditions are met, otherwise `"Invalid"`.

Problem 9: Shopping Cart Total with Discount

Given an array of cart items with `name`, `price`, and `quantity`, write a function `cartTotal(cart)` that calculates the total price after applying a 10% discount.

Problem 10: Fibonacci Sequence

Write a function `fibonacci(n)` that returns an array containing the first `n` numbers in the Fibonacci sequence.