JavaScript for QA Problem Set 1

1 1. JavaScript Fundamentals

Problem 1.1: Check if a number is even or odd

Write a function that takes a number and returns whether it's even or odd.

Problem 1.2: Sum of all even numbers in an array

Create a function that returns the sum of all even numbers from an array of integers.

Problem 1.3: Return names of users older than 18

Given an array of objects with `name` and `age`, return only the names of users over 18.

Problem 1.4: Reverse a string

Write a function that takes a string and returns the reverse of that string.

2 2. Conditionals and Loops

Problem 2.1: Count how many numbers are greater than 10

Given an array of numbers, return the count of values greater than 10.

Problem 2.2: FizzBuzz Classic

Print numbers from 1 to 50. For multiples of 3, print "Fizz", for 5 "Buzz", for both "FizzBuzz".

Problem 2.3: Find the maximum number in an array

Write a function that returns the largest number in an array.

3 3. Arrays and Objects

Problem 3.1: Filter active users

Given an array of user objects with a boolean `isActive` property, return only the active users.

Problem 3.2: Calculate total price of products

Each product has a `price` and `quantity`. Write a function to calculate the total value.

Problem 3.3: Convert array of strings to uppercase

Given an array of strings, return a new array with all strings in uppercase.

4 4. Functions and Parameters

Problem 4.1: Welcome message generator

Write a function that takes a name and returns `"Welcome, <name>!"`.

Problem 4.2: Multiply each number in an array by a given multiplier

Create a function that multiplies all numbers in an array by a value given as a parameter.

Problem 4.3: Create a user summary string

Given a user object with name, age, and city, return a string like `"Alice is 25 and lives in Paris"`.

5 5. Simple QA Testing Scenarios

Problem 5.1: Check if required fields are filled

Given a form object like { `name: "", email: "a@b.com"` }, return which fields are missing.

Problem 5.2: Validate a password length

Write a function that checks if a password is at least 8 characters long.

Problem 5.3: Check if user email includes "@"

Create a function that validates if the given email contains an "@" symbol.