# JavaScript Pre-DOM Skills Exam

Instructions:

Write clear, working JavaScript code for each task below. These tasks test your understanding of JS basics before we move into DOM manipulation.

1. Swap two variables without using a third variable.

Given:

let a = 5;

let b = 10;

Swap their values and print both.

2. Find the maximum number in an array.

Given:

let numbers = [4, 9, 2, 7, 5];

Write code to find and print the maximum number.

3. Count vowels in a string.

Given:

let str = "JavaScript is awesome";

Count how many vowels are in the string and print the count.

4. Check if a number is prime.

Write a function isPrime(num) that returns true if num is prime, otherwise false. Test with num = 17.

5. Reverse a string.

Write a function that takes a string and returns it reversed. Example: reverseString("hello") // "olleh"

6. Sum only even numbers in an array.

Given:

let nums = [1, 2, 3, 4, 5, 6];

Calculate and print the sum of only the even numbers.

7. Remove duplicates from an array.

Given:

let arr = [1, 2, 3, 2, 4, 1, 5];

Remove duplicates and print the new array.

8. FizzBuzz challenge.

Write a program that prints numbers from 1 to 30:

- "Fizz" for multiples of 3

- "Buzz" for multiples of 5

- "FizzBuzz" for multiples of both 3 and 5

- The number itself otherwise.

9. Factorial of a number using a function.

Write a function factorial(n) that returns the factorial of n. Example: factorial(5) // 120

10. Create an object and loop over its properties.

Create:

let car = { brand: "Toyota", model: "Corolla", year: 2020, color: "blue" };

Loop and print each in the format: brand: Toyota