JavaScript Practice Questions & Solutions

This document contains **JavaScript questions with detailed solutions**.
Click on any question to reveal the answer. 🚀

1 Console & Basic Operations (5 Questions)

▶ **1. Log "Hello, JavaScript!" to the console in 3 different ways.**

```
// Method 1: Using console.log()
console.log("Hello, JavaScript!");

// Method 2: Using console.warn()
console.warn("Hello, JavaScript!");

// Method 3: Using console.error()
console.error("Hello, JavaScript!");
```

▶ **2. Perform 35 * 2 - (10 / 2) + 7 and log the result.**

```
let result = 35 * 2 - 10 / 2 + 7;
console.log(result); // Output: 74
```

▶ **3. Log the data type of "123", 123, true, and null using typeof.**

```
console.log(typeof "123"); // "string"
console.log(typeof 123); // "number"
console.log(typeof true); // "boolean"
console.log(typeof null); // "object" (JavaScript quirk)
```

▶ **4. Write a program that swaps the values of two variables.**

```
let a = 10,
  b = 20;
console.log("Before Swap:", "a =", a, ", b =", b);

// Using a temporary variable
let temp = a;
a = b;
b = temp;
console.log("After Swap (Method 1):", "a =", a, ", b =", b);

// Using array destructuring (modern JS)
```

```
[a, b] = [10, 20];
[a, b] = [b, a];
console.log("After Swap (Method 2):", "a =", a, ", b =", b);
```

▶ **5. Use console.group() to organize logs into a group.**

```
console.group("User Info");
console.log("Name: John Doe");
console.log("Age: 25");
console.log("City: New York");
console.groupEnd();

console.groupCollapsed("Collapsed Group Example");
console.log("This content is collapsed by default.");
console.groupEnd();
```

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2 Variables & Data Types (5 Questions)

▶ **6. Declare a const object, modify its properties, and log the updated object.**

```
const person = { name: "Alice", age: 25, city: "New York" };
console.log("Before update:", person);

// Modifying properties
person.age = 26;
person.city = "Los Angeles";

// Adding a new property
person.country = "USA";

console.log("After update:", person);
```

▶ **7. Convert "50" (string) into a number using 3 different methods.**

```
let str = "50";

// Method 1: Using Number()
let num1 = Number(str);
console.log(num1, typeof num1); // 50 "number"

// Method 2: Using parseInt()
let num2 = parseInt(str);
console.log(num2, typeof num2); // 50 "number"

// Method 3: Using Unary `+` Operator
```

```
let num3 = +str;
console.log(num3, typeof num3); // 50 "number"
```

▶ **8. Check if "JavaScript" contains "Script" without using .includes().**

```
let str = "JavaScript";

// Method 1: Using .indexOf()
console.log(str.indexOf("Script") !== -1); // true

// Method 2: Using .search()
console.log(str.search("Script") !== -1); // true
```

▶ **9. Create an array of 5 numbers and log the sum using .reduce().**

```
let numbers = [10, 20, 30, 40, 50];
let sum = numbers.reduce((acc, num) => acc + num, 0);
console.log("Sum:", sum); // Sum: 150
```

▶ **10. Explain the difference between undefined, null, and NaN with examples.**

Concept	Meaning	Example
`undefined`	A variable is declared but not assigned a value	`let x; console.log(x); // undefined`
`null`	Represents an **intentional absence** of a value	`let y = null; console.log(y); // null`
`NaN` (Not a Number)	A result of an invalid math operation	`console.log("hello" / 2); // NaN`

```
let a; // Undefined
console.log(a); // undefined

let b = null; // Explicitly assigned null
console.log(b); // null

let c = "hello" / 2; // Invalid math operation
console.log(c); // NaN
console.log(typeof NaN); // "number" (weird JS quirk)
```

This document provides **clear explanations** and **collapsible answers** for easy reference. Happy coding! 🚀

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