JavaScript Problem Set 1 (PS1) Solutions

Problem 1 Variables and Data Types

Create a variable `name` and assign it your name. Then, create another variable `age` and assign it your age. Output both variables to the console.

Solution

```
let name = "John";
let age = 25;

console.log("Name:", name);
console.log("Age:", age);
```

Problem 2 Arithmetic Operations

Create two variables `num1` and `num2`. Perform and output:

- Addition
- Subtraction
- Multiplication
- Division

Solution

```
let num1 = 10;
let num2 = 5;

console.log("Addition:", num1 + num2);
```

```
console.log("Subtraction:", num1 - num2);
console.log("Multiplication:", num1 * num2);
console.log("Division:", num1 / num2);
```

Problem 3 Strings

Concatenate a greeting with your name using a variable.

Solution

```
let greeting = "Hello, World!";
let name = "John";

let message = greeting + " My name is " + name + ".";
console.log(message);
```

Problem 4 Conditional Statements

Check if a number is positive or negative. Print accordingly.

Solution

```
let number = -5;

if (number > 0) {
    console.log("Positive");
} else if (number < 0) {
    console.log("Negative");
} else {
    console.log("Zero");
}
```

Problem 5 Functions

Write a function `greet(name)` that prints a greeting.

Solution

```
function greet(name) {
    console.log("Hello, " + name + "!");
}

greet("Alice");
```

Problem 6 Arrays

Create an array of color names and print the second color.

Solution

```
let colors = ["red", "blue", "green"];
console.log("Second color:", colors[1]);
```

Problem 7 Loops (For Loop)

Print the numbers from 1 to 10 using a for loop.

Solution

```
for (let i = 1; i <= 10; i++) {
    console.log(i);
}
```

Problem 8 Objects

Create an object `person` with `firstName`, `lastName`, and `age`. Print `firstName`.

Solution

```
let person = {
    firstName: "John",
    lastName: "Doe",
    age: 25
};

console.log("First Name:", person.firstName);
```

Problem 9 Ternary Operator

Use a ternary operator to check if a number is even or odd.

Solution

```
let number = 4;

let result = (number % 2 === 0) ? "Even" : "Odd";
console.log(result);
```

Problem 10 Switch Statement

Write a program that checks the day of the week and prints a message.

Solution

```
let day = "Monday";

switch(day) {
    case "Monday":
        console.log("Start of the workweek!");
        break;
    case "Saturday":
    case "Sunday":
```

```
        console.log("Weekend!");
        break;
    default:
        console.log("Midweek day!");
}
```