Task Sheet - Coding Exercise

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Programming Language: JavaScript

1. Declare a variable and assign a string value to it. Example: let
   name = "John";
   console.log(name);

ANS → John

2. Declare a variable with `const` and assign a number. Example:
   const age = 25;
   console.log(age);

ANS → 25

3. Declare a boolean variable and print its value. Example: let
   isStudent = true;
   console.log(isStudent);

ANS → true

4. Demonstrate `typeof` operator with different data types. Example:
   console.log(typeof "Hello");
   console.log(typeof 42);
   console.log(typeof true);

ANS → string number boolean

5. Calculate total monthly expenses:
   let rent = 15000, groceries = 5000, otherExpenses = 3000; let
   totalExpenses = rent + groceries + otherExpenses;
   console.log("Total Monthly Expenses:", totalExpenses);

ANS → Total Monthly Expenses: 23000

6. Determine voting eligibility:
   let age = 17;
   let isEligible = age >= 18; console.log("Eligible
   to vote:", isEligible);

ANS→ Eligible to vote: false

7. Calculate discount price of a product:

```
let price = 1000, discount = 20;
let discountAmount = (price * discount) / 100;
let finalPrice = price - discountAmount;
console.log("Final Price:", finalPrice);
```

ANS → Final Price: 800

8. Calculate final grade of a student:

```
let math = 85, science = 90, english = 78; let
total = math + science + english;
let average = total / 3; console.log("Final
Grade:", average);
```

ANS → Final Grade: 84.33

9. Calculate tip amount:

```
let bill = 500, tipPercentage = 10;
let tipAmount = (bill * tipPercentage) / 100;
console.log("Tip Amount:", tipAmount);
```

ANS → Tip Amount: 50

10. Check leap year:

```
let year = 2024;
let isLeapYear = (year % 4 === 0 && year % 100 !== 0) || year % 400 === 0;
console.log("Is Leap Year:", isLeapYear);
```

ANS → Is Leap Year: true

11. Calculate BMI:

```
let weight = 70, height = 1.75;
let bmi = weight / (height * height);
console.log("BMI:", bmi);
```

ANS → BMI: 22.857142857142858

12. Check senior citizen discount eligibility:

```
let age = 65;
let isSenior = age >= 60;
console.log("Eligible for senior citizen discount:", isSenior);
```

ANS → Eligible for senior citizen discount: true

13. Determine type of triangle:

```
let a = 3, b = 4, c = 5;
 let triangleType = (a === b && b === c) ? "Equilateral" : (a === b || b === c || a === c) ? "Isosceles" :
"Scalene";
console.log("Triangle Type:", triangleType);
```

ANS → Triangle Type: Scalene

14. Calculate hourly wage:

```
let salary = 50000, hours = 160;
let hourlyWage = salary / hours;
console.log("Hourly Wage:", hourlyWage);
```

ANS → Hourly Wage: 312.5

15. Calculate simple interest:

```
let principal = 10000, rate = 5, time = 2; let
interest = (principal * rate * time) / 100;
console.log("Simple Interest:", interest);
```

ANS → Simple Interest: 1000

16. Convert height from feet to cm:

```
let feet = 5.8;
let cm = feet * 30.48;
console.log("Height in cm:", cm);
```

ANS → Height in cm: 176.784

17. Check affordability of a product:

```
let budget = 5000, price = 4500;
let canBuy = budget >= price;
console.log("Can afford:", canBuy);
```

ANS → Can afford: true

18. Check if a number is positive, negative, or zero:

```
let number = -5;
let result = (number > 0) ? "Positive" : (number < 0) ? "Negative" : "Zero";
console.log("Number type:", result);
```

ANS → Number type: Negative

19. Calculate fuel efficiency: let

```
distance = 500, fuel = 25;
let efficiency = distance / fuel;
console.log("Fuel Efficiency:", efficiency);
```

ANS → Fuel Efficiency: 20

20. Calculate final bill amount with discount and tax:

```
let price = 1000, discount = 10, tax = 5;
let discountedPrice = price - (price * discount / 100);
let finalBill = discountedPrice + (discountedPrice * tax / 100); console.log("Final
Bill Amount:", finalBill);
```

ANS → Final Bill Amount: 945