**Task 1 : Simple Programs todo for variables**

Q1. Declare four variables without assigning values and print them in console

var a;

var b;

var c;

var d;

console.log(a);

console.log(b);

console.log(c);

console.log(d);

Q2. How to get value of the variable myvar as output

var myvar= 1;

console.log("myvar");

var myvar = 1;

console.log(myvar);

Q3. Declare variables to store your first name, last name, marital status, country and age in multiple lines

var firstName;

var lastName;

var maritalStatus;

var country;

var age;

firstName = "Nandini";

lastName = "Jayaram";

maritalStatus = "Married";

country = "India";

age = 30;

Q4. Declare variables to store your first name, last name, marital status, country and age in a single line

var firstName, lastName, maritalStatus, country, age;

firstName = "Nandini";

lastName = "Jayaram";

maritalStatus = "Married";

country = "India";

age = 30;

Q5. Declare variables and assign string, boolean, undefined and null data types

I am 25 years old.

You are 30 years old.

// String data type

var myAge = "I am 25 years old.";

var yourAge = "You are 30 years old.";

// Boolean data type

var Adult = true;

// Undefined data type

var ab;

// Null data type

var empty = null;

Q6. Convert the string to integer.

parseInt()

Number()

Plus sign(+)

//ParseInt()

var a = "42";

var b = parseInt(a);

console.log(b);

//Number()

var a = "42";

var b = Number(a);

console.log(b);

//Plus Sign +

var a = "42";

var b = +(a);

console.log(b);

Q7. Write 6 statement which provide truthy & falsey values.

console.log(Boolean("World"));

console.log(Boolean(undefined));

console.log(Boolean(3));

console.log(Boolean({}));

console.log(Boolean(""));

console.log(Boolean(NaN));

**Task 2: Simple Programs todo for Operators**

Q1. Square of a number

var a = 6;

var b = a\*a;

console.log("The square of", a, "is", b);

Q2. Swapping the numbers

var a = 10;

var b = 20;

console.log("Before swapping: a =", a, ", b =", b);

a = a + b;

b = a - b;

a = a - b;

console.log("After swapping using arithmetic operations: a =", a, ", b =", b);

Q3. Addition of 3 numbers

var a = 10;

var b = 20;

var c = 35;

var d = a + b + c;

console.log("The sum of", a, ",", b, "and", c, "is", d);

Q4.Celsius to Fahrenheit conversion

var c = 25;

var f = c \* (9/5) + 32;

console.log(c + "°C is equal to " + f + "°F");

Q5. Meter to miles

var meters = 1000;

var miles = meters / 1609.34;

console.log(meters + " meters is equal to " + miles + " miles");

Q6. Pounds to Kg

var pounds = 110;

var kilograms = pounds \* 0.453592;

console.log(pounds + " pounds is equal to " + kilograms + " kilograms");

Q7. Calculate Batting Average

var a = 900;

var b = 20;

var avg = a/b;

console.log("The batting average is: " + avg);

Q8. Calculate five test scores and print their average

var a = 70;

var b = 92;

var c = 65;

var d = 82;

var e = 97;

var total = a+b+c+d+e;

var avg = total/5;

console.log("The average of the five test scores is: " + avg);

Q9. Power of any number x ^ y.

var a = 5;

var b = 10;

var c = Math.pow(a,b;

console.log(a + " raised to the power of " + b + " is: " + c);

Q10. Calculate Simple Interest

var p = 1000;

var r = 5;

var t = 2;

var si = (p \* r \* t) / 100;

console.log(si);

Q11. Calculate area of an equilateral triangle

var sqrt = Math.sqrt(3);

var a = 10;

var area = (sqrt / 4) \* Math.pow(a, 2);

console.log("The area of the equilateral triangle with side length " + a + " units is: " + area + " square units");

Q12. Area Of Isosceles Triangle

var a = 10;

var b= 8 ;

var area = (b / 2) \* Math.sqrt(Math.pow(a, 2) - Math.pow(b / 2, 2));

console.log("The area of the isosceles triangle is " + area );

Q13. Volume Of Sphere

var r = 5;

var vol = (4 / 3) \* Math.PI \* Math.pow(r, 3);

console.log("The volume of the sphere with radius " + vol);

Q14. Volume of Prism

var l = 3;

var w = 5;

var h = 10;

var vol = l \* w \* h;

console.log("The volume of the prism is " + vol);

Q15. Find area of a triangle.

var b = 2;

var h = 4;

var area = 0.5 \* b \* h;

console.log("The area of the triangle is " + area );

Q16. Give the Actual cost and Sold cost, Calculate Discount Of Product

var a = 100;

var b = 50;

var d = a - b;

console.log("The discount on the product is: $" + d);

Q17. Given their radius of a circle and find its diameter, circumference and area.

var r = 4;

var d = 4 \* r;

var c = 4 \* Math.PI \* r;

var area = Math.PI \* r \* r;

console.log("Diameter: " + d );

console.log("Circumference: " + c);

console.log("Area: " + area);

Q18. Given two numbers and perform all arithmetic operations.

var a =10;

var b= 8;

var add = a + b;

var sub= a - b;

var mul = a \* b;

var div = a / b;

var mod = a % b;

console.log("Given the numbers " + a + " and " + b + ":");

console.log("Addition: " + add);

console.log("Subtraction: " + sub);

console.log("Multiplication: " + mul);

console.log("Division: " + div);

console.log("Modulus: " + mod);

Q19. Display the asterisk pattern as shown below(No loop needed):

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console.log("\*\*\*\*\*");

console.log("\*\*\*\*\*");

console.log("\*\*\*\*\*");

console.log("\*\*\*\*\*");

console.log("\*\*\*\*\*");

Q20. Calculate electricity bill?

For example, a consumer consumes 100 watts per hour daily for one month. Calculate the total energy bill of that consumer if per unit rate is 10?

var a = 0.1;

var b = 30;

var c = 10;

var monthlyConsumption = a \* b;

var d = monthlyConsumption \* c;

console.log("The total electricity bill is: $" + d);

Q21. Program To Calculate CGPA

var a = 3.5;

var b = 4.0;

var c = 3.2;

var d = 3.8;

var CGPA = (a + b + c + d) / 4;

console.log("The CGPA is: " + CGPA.toFixed(2));