Q1.

// 1. Declare two variables a and b with initial numeric values. Reassign a to the sum of a and b, then log the result.

let number="Joo";

number=number/0;

console.log(number);

Q2.

// 2. Create a variable name with your name as a string. Log a greeting message using that variable.

console.log("Joseph ASHIMIRWE");

let name="Kevin MUGABO";

console.log("Hello, my name is",name);

Q3.

// 3. Declare a boolean variable isStudent and assign it true. Reassign it to false. Log the value after reassignment.

let isStudent=true;

console.log("Is student:",isStudent);

isStudent=false;

console.log("Is student:",isStudent);

Q4.

// 4. Declare a constant PI with value 3.14. Attempt to reassign it and catch the error. Log the error message.

const pi=3.14;

pi=10; // This will cause an error because pi is a constant

console.log("Value of pi:",pi);

then

const PI = 3.14;

try {

PI = 3.14159;

} catch (error) {

console.log("Q4:", error.message); // "Assignment to constant variable."

}

Q5.

// 5. Declare a variable x with value 10. Use the increment operator to increase its value by 1, then log x.

let x=10;

console.log("Initial value of x:",x);

x+=1;

console.log("New Value of x:",x);

Q6.

// 6. Declare two string variables str1 and str2. Concatenate them and output the combined string.

let str1="I love ";

let str2="JavaScript";

console.log(str1+str2);

let result=str1.concat(str2);

console.log("Result after combining",str1,"and",str2,":",result);

Q7.

// 7. Declare a variable age with a number value. Use a comparison operator to check if age is greater than 18, log the boolean result.

let age=16;

console.log(age>=18);

let isage=age>=18;

console.log("Is ",age," greater than or equal to 18?:",isage);

Q8.

// 8. Declare a variable price with value 100. Use the modulus operator to find the remainder when divided by 9 and log the result.

let price = 100;

console.log("Q8:", price % 9); // 1let price=100;

console.log("The modulus of 100%9 is:",price%9);

Q9.

// 9. Create two variables a and b. Use arithmetic operators to perform addition, subtraction, multiplication, division, and modulus logging each result.

let a=9;

let b=5;

console.log("Additionof",a," and ",b," is:",a+b);

console.log("Subtraction of",a," and ",b," is:",a-b);

console.log("Multiplication of",a," and ",b," is:",a\*b);

console.log("Division of",a," and ",b," is:",a/b);

console.log("Modulus of",a," and ",b," is:",a%b);

Q10.

// 10. Declare a variable isEqual that checks if 5 + 5 equals 10. Log the result.

let isEqual=5+5===10;

console.log(isEqual);

Q11.

// 11. Declare a variable count with initial value 4. Use the += operator to increment it by 5, then log the value.

let count=4;

count+=5;

console.log("The value is:",count);

Q12.

// 12. Declare a variable name and assign your name and log your name. Use the typeof operator to log its data type also.

let fullname;

fullname="Josef Marie";

console.log("Full name is:",fullname);

console.log("The data type is:",typeof fullname);

Q13.

// 13. Create a boolean variable isActive. Use a logical NOT operator to invert its value, then log the result.

let isActive=false;

console.log(!isActive);

Q14.

// 14. Declare variables a and b, assign values, and use the += and -= operators to modify them. Log the results.

let a=12;

let b=17;

a+=b;// a=a+b

b-=a;// b=b-a

console.log("The value of a is:",a);

console.log("The value of b is:",b);

console.log("The sum of a and b is:",a+b);

console.log("The difference of a and b is:",a-b);

Q15.

// 15. Create a variable result that holds the result of 3 \* 4 + 5. Log the output.

let result=3\*4+5;

console.log("The result is:",result);

Q16.

// 16. Declare a variable x with value 7. Use the ternary operator to check if x is even or odd, then log 'even' or 'odd'.

let x=12;

let check=(x%2===1)?"Odd":"Even";

console.log("The number is:",check);

Q17.

// 17. Use the increment operator (++) on a number variable and log the new value.

let number=9;

++number;// or ++number

console.log("The incremented value is:",number++);

console.log(number);

Q18.

// 18. Use logical AND (&&) operator with two booleans and log the result.

let value1=true;

let value2=false;

console.log("The value of AND is:",value1&&value2);

console.log("The value of OR is:",value1||value2);

Q19.

// 19. Declare a variable as NaN (using division by zero) and log it.

let number=0;

console.log(typeof number);

number=number/0;

console.log(number);

Q20.

// 20. Use the strict inequality operator (!==) on two similar values of different types and log the result.

let num1=30;

let num2='30';

console.log(num1!==num2);