/\* Q1. write a javaScript program to find the area of a rectangle using a function. where users can enter the value run time and see the result in the browser \*/

//A1:-

//declare variables

/\*

let width = 4;

let length = 6;

//create a function

function Area(width, length){

  return (width \* length);

}

//call

console.log("area of rectangle is" + " " + Area(width, length) );

\*/

/\* Q2. write a program to print the below pattern of stars.

\*

\*\*

\*\*\*

\*\*\*\*

\*\*\*\*\* \*/

//A2:-

/\*

for (var i=1; i<=5; i++){

  console.log("\*".repeat(i));

}

\*/

//using repeat() method to construct and return specified copies, concatenated together.

/\* Q3. write a program to print the pyramid of stars. \*/

//A3.

/\*

function pyramid(n){

  for(let i=1; i<=n; i++){

    let str =" ".repeat(n-i);

    let str2 ="\*".repeat(i\*2 -1)

    console.log(str + str2 + str);

  }

}

pyramid(5);

\*/

/\* Q4. write a program named displayname() which will print your name. but this function will pass as a callback to another function named main() pass your name from main() and argument and print in the console via displayname(). \*/

//A4.

/\*

function main(firstname, lastname){

  console.log("hello, my name is " + firstname + " " + lastname);

}

//callback function

function displayname(){

  main("vinay", "choudhary");

}

displayname();

\*/

/\* Q5. what is the output of below code and why? \*/

//A5.

/\*

let obj1 = { name: "Monday" };

let obj2 = { name: "Monday" };

console.log(obj1 == obj2);

\*/

//Output = False

//1. obj1 and obj2 are in global frame.

/\* Q6. What is the output of below code and why? \*/

//A6.

/\*

function display(MyName)

{

let userName = MyName || "CK";

console.log(userName);

return true

}

display('Yuvraj')

\*/

//Output = yuvraj

//1. display() points console.log(username)(101)

//2. myname is assign to "yuvraj" and username is also "yuvraj"(97,98)

/\* Q7. Explain the output of the below code. \*/

//A7.

/\*

for (let i = 0; i < 5; i++) {

  if (i == 2) {

  continue;

  }

  console.log(i);

  for (let i = 0; i <= 3; i++) {

  if (i == 2) {

  break;

  }

  console.log(`i:${i}`);

  }

  }

\*/

/\*

Output = 0

         i:0

         i:1

         1

         i:0

         i:1

         3

         i:0

         i:1

         4

         i:0

         i:1

\*/

//1. it will print zero from the first for loop, console.log(i).

//2. it will print i:0, i:1 from the second for loop, console.log(`i:${i}`) and continue till if condition(i==2)(SECOND IF CONDITION) and breaks the loop and will move to the first loop again.

//3. same process for each until it reaches the (i==2)(FIRST IF CONDITION) condition and will CONTINUE THE LOOP AGAIN FROM START and after the execution of continue statement the loop will print same  for 3 and 4 and the execution will be terminated as i<5.

/\* Q8. - Explain the output of the below code. \*/

//A8.

/\*

let value = 0;

if (-2) {

var value = 10;

}

console.log(value);

\*/

//Output = cannot execute(SyntaxError)

//1. Identifier 'value'(153) has already beed declared at(151).

/\* Q9. Explain the output of the below code. \*/

//A9.

/\*

console.log(add);

var add = function (a, b) {

const results = a + b;

return results;

};

\*/

//Output = Undefined

//1. at console.log add is undefined.

/\* Q10.  Explain the result of the below codes? \*/

//A10.

/\*

let results = ((4 + 5) / 3) \*\* 2

console.log(results)

let result = NaN && null || '0' && 0

console.log(result)

\*/

//console.log(0 === 0);

//Output = 9,0

//1. Operator Precedence...

//2. \*\* is is exponentiation

//3. the output 9 is from the first two lines(183,184) i.e (4+5) is 9 and 9/3 is 3 and 3\*\*2 is 9.

//4. compare all one by one(184) i.e NaN == NaN is false and NaN === NaN is false, null == null is true and null === null is true, '0' == '0' is true and '0' === '0' is true, 0 == 0 is true and 0 === 0 is true.

//5. the &&(AND) operator returns is left side value and the ||(OR) operator returns the right side value.