Practice Problems

Relevel
by Unacademy

Problem - 1

Write a program to create a Mathematical calculation table from 0 to given number n.

Solution: https://jsfiddle.net/saravananslb/yds2v4p1/1/

Code:

```
function mathsTable (table, n) {
for (let i = 1; i<=n; i++) {
console.log(`${table} * ${i} is ${table * i}`)
}
}
mathsTable(5, 10)
```

Problem - 2

Write a program to find the square of given number from 0 to n.

Solution: https://jsfiddle.net/saravananslb/pnj107a2/

Code:

```
function square(n) {
for (let i = 1; i<=n; i++){
console.log(`!Square of ${i} is ${i * i}`)
}
}
square(10)
```

Problem - 3

Given `n` pieces of sweet, help Peter and John divide it among themselves such that both get an equal number of sweets. Note that the sweet can not be broken into sub-pieces. You have to tell if it is possible to make such distribution or not based upon n number of pieces. I.e., possible outputs: `yes` or `no.`

Example-1
Input: 8
Output: Yes

Example-2
Input: 7
Output: No

Problem - 3

Solution: https://jsfiddle.net/fz5bey07/

```
function verify(n)
{
return (n <= 2
? false
: (n % 2 == 0
? true
: false));
}
let n = 8;
console.log((verify(n) ? "YES" : "NO") + "\n");
```

Problem - 4

Given the length of three line segments as a, b, and c., Find if they can form a triangle or not?
(Students are not expected to take any user input, solve the problem using hardcoded value)

Example-1
Input: a=7,b=10,c=5
Output: Triangle

Problem - 4

Solution:

```
function checkIfTriangle(a, b, c)
{
if ( b + c <= a || a + c <= b || a + b <= c )
return false;
else
return true;
}
let a = 7, b = 10, c = ;
if (checkIfTriangle(a, b, c))
console.log("Triangle");
else
console.log("Non Triangle");
```

Problem - 5

Write a function that takes two numbers x and y and calculates x^y

Solution: https://jsfiddle.net/saravananslb/sujo36fp/

Code:

```
function XpowY(x, y){
let ans = 1;
for(let i = 0; i < y; i++)
ans = (ans * x);
return ans; }
let x = 4;
let y = 4;
console.log(XpowY(x, y));
```

Problem - 6

Write a function that takes two parameters num and k and returns the value of Binomial Coefficient
C(num, k)

Sample input: num = 6, k = 3
Sample output: 20

Problem - 6

Solution: https://jsfiddle.net/saravananslb/xy84gmLn/1/

```
function binomialCoefficient(num , k)
{
if (k > num)
return 0;
if (k == 0 || k == num)
return 1;
return binomialCoefficient(num - 1, k - 1)
+ binomialCoefficient (num - 1, k);
}
ar num = 6, k = 3;
console.log("Value of C("+num +", "+k+") is
"+binomialCoefficient(num, k));
```

Problem - 7

Given a number n, calculate n!

Example-1
Input: 3
Output: 6

Example-2
Input: 5
Output: 120

Problem - 7

Solution: https://jsfiddle.net/rd45s6bh/

```
function factorial(n) {
if (n == 0) return 1;
return n * factorial(n - 1);
}
let num = 5;
console.log("Factorial of " + num + " is " +
factorial(num));
```

Problem - 8

Given an integer n, write a function that returns the count of trailing zeroes in n!.

Example-1

Input: 5

Output: 1

Problem - 8

Solution: https://jsfiddle.net/8xj6ubom/

```
function findTrailingZeros(n)
{
if(n < 0)
return -1;
let count = 0;
for (let i = 5; Math.floor(n / i) >= 1; i *= 5)
count += Math.floor(n / i);
return count;
}
let n = 50;
console.log("Count of trailing 0s in " + 100
+ " is " + findTrailingZeros(n));
```

Thank You!