**JavaScript Worksheet 1 Grade 8 ICSE Term 2**

**FOR LOOP**

**Syntax:**

**for(initialisation (starting point); condition (ending point); increment/decrement)**

**{**

**//statement**

**}**

**For e.g.**

**<script>**

**for(var i = 1; i <= 10; i++)**

**{**

**document.write(i)**

**}**

**</script>**

**Output: 12345678910**

***Try the above program out in w3schools or notepad.***

|  |  |
| --- | --- |
| **Questions** | **Status** |
| 1. Correct the error if (var i = 0; i <5; i++)  {   document.write(i);  } |  |
| 1. Correct the error for (i = 0; i <5; i++)  {   document.write(i);  } |  |
| 1. Fill in the blank to print numbers from 1 to 10 using a for loop: for (var i = \_\_; i <= \_\_\_; i++)  {   document.write (i);  } |  |
| 1. Find and correct the error in this loop to print even numbers from 2 to 10: for (var i = 2; i <= \_\_\_; i\_\_\_)  {   document.write(i);  } |  |
| 1. Write the output of the following code: for (var i = 2; i <=10; i+=3)  {   document.write(i);  } |  |
| FOR LOOP Stage 1 Complete!! Well done | |
| 1. Take input of a number with +prompt. Using for loop, print all the numbers from 1 till that number. For e.g. Input = 7  Output = 1234567 *(Hint: Use document.write(i+”<br”>) for a better output)* |  |
| 1. Take input of two numbers as starting and ending points with +prompt. Using for loop, print all the numbers from the starting number till the ending number. For e.g. Input = 7, 14 Output = 7891011121314 *(Hint: Use document.write(i+”<br”>) for a better output)* |  |
| 1. Choose the right option for odd numbers and write the output:   for (var i = 5; i <=15; i++)  {  if(i%2\_\_\_\_0)  document.write(“Odd Number = “+i);  }  Option a – double equals to (==)  Option b – not equals to (!=) |  |
| 1. Print all the even numbers from 10 to 46 using if statement. *(Hint: Try i%2==0)* |  |
| 1. Print all the numbers from 10 to 65 which are divisible by 3 |  |
| FOR LOOP Stage 2 Complete!! Well done | |

**SUM AND COUNT**

* SUM is the process of adding of numbers. It answering the question: HOW MUCH? Or WHAT IS THE TOTAL?
* COUNT is the process of determining the number of occurrences of an object or determines the total number of something and answers the question HOW MANY?

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Student Name** | **Computer Marks** |
| 1 | Helene | 99 |
| 2 | Beena | 100 |
| 3 | Nakul | 91 |
| 4 | Reza | 95 |

Count = 4 Sum = 385

Sum and count are mostly used in for loop programs.

For each Sum and Count, define their respective variables first as starting from 0 **before the for loop.**

For e.g.

Q. Find the sum of numbers between 1 to 5.

<script>

var sum = 0

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

{

sum = sum + i;

}

alert(“Sum = ”+sum)

</script>

Output: Sum = 15

Q. Find the number of even numbers between 1 to 16.

<script>

var count = 0

for(var i=1;i<=16;i++)

{

if(i%2 == 0)

count = count + 1; //you can also use only count++

}

alert(“Number of even numbers = ”+count)

</script>

**Output:** Numbers of even number = 8

***Try the above programs out in w3schools or notepad.***

|  |  |
| --- | --- |
| **Questions** | **Status** |
| 1. Find the error in the following code  <script>   var sum = 0  for(var i=1;i<=5;i++)  {  sum = sum + i;  }  alert(“Sum = ”+i)  </script> |  |
| 1. Write a program to find the sum of all numbers between 16 and 35. |  |
| 1. Write a program to count the number of odd numbers between 18 and 50. |  |
| 1. Write a program to find the multiplication of all numbers between 1 to 5 (1x2x3x4x5) |  |
| 1. Write a JavaScript program to find and print the factorial of a number.   E.g.  Factorial of 6 = 1x2x3x4x5x6  Factorial of 4 = 1x2x3x4 |  |
| 1. Develop a program that finds and prints the prime numbers between 1 and 50. |  |
| 1. Create a program that calculates and prints the sum of all prime numbers between 1 and 100. |  |
| SUM and COUNT Complete!! Well done | |