# **JavaScript Functions — Warmup Pbms**

1. Write a function called “addFive”.

Given a number, “addFive” returns 5 added to that number.

Input:

addFive(5);

addFive(0);

addFive(-5);

Output:

10

5

0

**Program:**

var num = 10;

function addFive(num) {

return num+5;

}

var result = addFive(num)

console.log(result);

**Output:**

15

2.Write a function called “getOpposite”.

Given a number, return its opposite

Input:

getOpposite(5);

getOpposite(0);

getOpposite(-5);

getOpposite(“5a”);

getOpposite(5.5);

Output:

-5

0

5

-1

-1

**Program:**

var num = 5;

function getOpposite(num) {

if(Number.isInteger(num))

return -num;

else

return -1;

}

var result = getOpposite(num)

console.log(result);

**OUTPUT:**

-5

3. Fill in your code that takes a number of minutes and converts it to seconds.

Examples

toSeconds(5) ➞ 300

toSeconds(3) ➞ 180

toSeconds(2) ➞ 120

**Program:**

var min = 5;

function toSeconds(min) {

return min\*60;

}

var secs = toSeconds(min)

console.log(secs);

**OUTPUT:**

300

4. Create a function that takes a string and returns it as an integer.

Examples

toInteger(“6”) ➞ 6

toInteger(“1000”) ➞ 1000

toInteger(“12”) ➞ 12

**Program:**

var mystr = "5";

function toInteger(mystr) {

return parseInt(mystr);

}

var myint = toInteger(mystr)

console.log(myint);

**OUTPUT:**

5

5. Create a function that takes a number as an argument, increments the number by +1 and returns the result.

Examples

nextNumber(0) ➞ 1

nextNumber(9) ➞ 10

nextNumber(-3) ➞ -2

**Program:**

var myint = 0;

function nextNumber(myint) {

return myint+1;

}

var myNextint = nextNumber(myint);

console.log(myNextint);

**OUTPUT:**

1

6. Create a function that takes an array and returns the first element.

Examples

getFirstElement([1, 2, 3]) ➞ 1

getFirstElement([80, 5, 100]) ➞ 80

getFirstElement([-500, 0, 50]) ➞ -500

**Program**

var arr = [1, 2, 3];

function getFirstElement(arr) {

return arr[0];

}

var data = getFirstElement(arr);

console.log(data);

**OUTPUT:**

1

7. Convert Hours into Seconds

Write a function that converts hours into seconds.

Examples

hourToSeconds(2) ➞ 7200

hourToSeconds(10) ➞ 36000

hourToSeconds(24) ➞ 86400

**Program**

var hrs = 2;

function hourToSeconds(hrs) {

return hrs\*60\*60;

}

var data = hourToSeconds(hrs);

console.log(data);

**Output**

7200

8. Find the Perimeter of a Rectangle

Create a function that takes height and width and finds the perimeter of a rectangle.

Examples

findPerimeter(6, 7) ➞ 26

findPerimeter(20, 10) ➞ 60

findPerimeter(2, 9) ➞ 22

**Program**

function findPerimeter(num1,num2) {

return 2\*(num1+num2);

}

var peri = findPerimeter(6,7)

console.log(peri);

**Output**

26

9. Less Than 100?

Given two numbers, return true if the sum of both numbers is less than 100. Otherwise return false.

Examples

lessThan100(22, 15) ➞ true

// 22 + 15 = 37

lessThan100(83, 34) ➞ false

// 83 + 34 = 117

**Program:**

function lessThan100(num1,num2) {

if((num1+num2)<100)

return true;

else

return false;

}

var res = lessThan100(22,15)

console.log(res);

**Output**

true

10. There is a single operator in JavaScript, capable of providing the remainder of a division operation. Two numbers are passed as parameters. The first parameter divided by the second parameter will have a remainder, possibly zero. Return that value.

Examples

remainder(1, 3) ➞ 1

remainder(3, 4) ➞ 3

remainder(-9, 45) ➞ -9

remainder(5, 5) ➞ 0

**Program:**

function remainder(num1,num2) {

return num1%num2;

}

var res = remainder(1,3)

console.log(res);

**Output:**

1

11. Old macdonald had a farm:

MacDonald is asking you to tell him how many legs can be counted among all his animals. The farmer breeds three species:

turkey = 2 legs

horse = 4 legs

pigs = 4 legs

The farmer has counted his animals and he gives you a subtotal for each species. You have to implement a function that returns the total number of legs of all the animals.

Examples

CountAnimals(2, 3, 5) ➞ 36

CountAnimals(1, 2, 3) ➞ 22

CountAnimals(5, 2, 8) ➞ 50

**Program:**

function CountAnimals(tur,horse,pigs) {

return (2\*tur)+(4\*horse)+(4\*pigs);

}

var legs = CountAnimals(2,3,5)

console.log(legs);

**Output:**

36

12. Frames Per Second

Create a function that returns the number of frames shown in a given number of minutes for a certain FPS.

Examples

frames(1, 1) ➞ 60

frames(10, 1) ➞ 600

frames(10, 25) ➞ 15000

**Program**

function frames(num1,num2) {

return (num1\*60)\*num2;

}

var fps = frames(1,2)

console.log(fps);

**Output:**

120

13.Check if an Integer is Divisible By Five

Create a function that returns true if an integer is evenly divisible by 5, and false otherwise.

Examples

divisibleByFive(5) ➞ true

divisibleByFive(-55) ➞ true

divisibleByFive(37) ➞ false

**Program:**

function divisibleByFive(num1) {

if(num1%5===0)

return true;

else return false;

}

var divisible = divisibleByFive(5);

console.log(divisible);

**Output:**

true

14.Write a function called “isEven”.

Given a number, “isEven” returns whether it is even.

Input:

isEven(12);

isEven(0);

isEven(11);

isEven(“11h”);

Output:

true

true

false

-1

**Program:**

function isEven(num){

if(Number.isInteger(num)){

if(num%2===0)

return true;

else return false;

}

else return -1;

}

var even = isEven(5)

console.log(even);

**Output:**

false

15.Write a function called “areBothOdd”.

Given 2 numbers, “areBothOdd” returns whether or not both of the given numbers are odd.

Input:

areBothOdd(1, 3);

areBothOdd(1, 4);

areBothOdd(2, 3);

areBothOdd(0, 0);

Output:

true

flase

flase

flase

**Program**

function areBothOdd(num1, num2){

if((num1%2===1)&&(num2%2===1))

return true;

else return false;

}

let res=areBothOdd(3,8);

console.log(res);

**OUTPUT**

false

16.Write a function called “getFullName”.

Given a first and a last name, “getFullName” returns a single string with the given first and last names separated by a single space.

Input:

getFullName(“GUVI”, “GEEK”);

getFullName(“GUVI”, );

getFullName(, “GEEK”);

getFullName(“”, “”);

Output:

“GUVI GEEK”

“GUVI”

“GEEK”

“”

**Program**

function getFullName(firstName,lastName){

if(firstName===undefined)

return lastName;

else if(lastName===undefined)

return firstName;

else if((firstName==="")&&(lastName===""))

return "";

else

return firstName+" "+lastName;

}

let res=getFullName("GUVI","GEEK");

console.log(res);

**Output:**

GUVI GEEK

17.Problem:

Write a function called “getLengthOfWord”.

Given a word, “getLengthOfWord” returns the length of the given word.

Input:

getLengthOfWord(“GUVI”);

getLengthOfWord(“”);

getLengthOfWord();

getLengthOfWord(9);

Output:

4

0

-1

-1

**Program**

function getLengthOfWord(word1){

if(typeof(word1)==='string')

return word1.length;

else

return -1;

}

let res=getLengthOfWord("Iniyan");

console.log(res);

**Output:**

6

18.Write a function called “isSameLength”.

Given two words, “isSameLength” returns whether the given words have the same length.

Input:

isSameLength(“GUVI”, “GEEK”);

Output:

true

**Program**

function isSameLength(word1,word2){

if(word1.length===word2.length)

return true;

else return false;

}

let res=isSameLength("Iniyan","sathya");

console.log(res);

**Output**

true

19.Create a function to calculate the distance between two points defined by their x, y coordinates

**Program**

console.log(getDistance(100, 100, 400, 300));

function getDistance(x1, y1, x2, y2)

{

return Math.sqrt(Math.pow(x2 - x1, 2) +

Math.pow(y2 - y1, 2) \* 1.0);

}

**Output**

360.5551275463989

20. Write a function called “getNthElement”.

Given an array and an integer, “getNthElement” returns the element at the given integer, within the given array. If the array has a length of 0, it should return ‘undefined’.

Input:

getNthElement([1, 3, 5], 1);

Output:

3

**Program:**

console.log(getNthElement([100, 200, 400],1));

function getNthElement(array,n){

if((array.length===0)||(n>(array.length-1)))

return "undefined";

else return array[n];

}

**OUTPUT**

200

21.Write a function called “getLastElement”.

Given an array, “getLastElement” returns the last element of the given array. If the given array has a length of 0, it should return ‘-1’.

Input:

getLastElement([1, 2, 3, 4]);

Output:

4

**Program:**

console.log(getLastElement([100, 200, 400,500,600]));

function getLastElement(array){

if(array.length===0)

return -1;

else return array[array.length-1];

}

**OUTPUT:**

600

22.Write a function called “getProperty”.

Given an object and a key, “getProperty” returns the value of the property at the given key. If there is no property at the given key, it should return undefined.

var obj = {

mykey: “value”

};

Input:

getProperty(obj,’mykey’);

getProperty(obj,’dummykey’);

Output:

value

NA

**Program**

var obj = {

key1: "value1",

key2: "value2",

key3: "value3",

key4: "value4"

};

function getProperty(obj, key) {

if(obj[key]===undefined)

return "NA";

else return obj[key];

}

console.log(getProperty(obj,"key2"));

console.log(getProperty(obj,"key5"));

**Output**

value2

NA

23. Write a function called “addProperty”.

Given an object and a key, “addProperty” adds a new property on the given object with a value of true.

var obj = {

}

Input:

addProperty(obj, “mykey”);

Output:

{

mykey: true

}

**Program**

var obj = { };

function addProperty(obj, key){

obj[key]=true;

return obj;

}

console.log(addProperty(obj,"key5"));

console.log(addProperty(obj,"key2"));

**Output**

{ key5: true }

{ key5: true, key2: true }

24. Write a function called “removeProperty”.

Given an object and a key, “removeProperty” removes the given key from the given object.

Input:

removeProperty(obj, “name”);

Output:

undefined

**Program**

var obj = {

key1:"value1",

key2:"value2",

key3:"value3"

};

function removeProperty(obj,key){

delete obj.key;

return obj.key;

}

console.log(removeProperty(obj,"key2"));

console.log(removeProperty(obj,"key3"));

**Output**

undefined

undefined

25.Return an array, where the first element is the count of positive numbers and the second element is the sum of negative numbers.

**Program:**

var arr = [-5, 10, -3, 12, -9, 5, 90, 0, 1];

var ar2 = function countPositivesSumNegatives(arr) {

let pos=0;

let neg=0;

for(let i=0;i<arr.length;i++){

if(arr[i]>=0)

pos++;

else

neg++}

let res=[];

res.push(pos);

res.push(neg);

return res;

}

console.log(ar2(arr));

**Output:**

[6,3]

26. Create a function that receives an array of numbers and returns an array containing only the positive numbers.

**Program:**

function getPositives(ar)

{

let data=ar.filter((x)=>x>=0);

return data;

}

var ar = [-5, 10, -3, 12, -9, 5, 90, 0, 1];

var ar2 = getPositives(ar);

console.log(ar2);

**Output:**

[ 10, 12, 5, 90, 0, 1 ]

27.Write a function `powersOfTwo` which will return a list of all powers of 2 from 0 to n (where n is an exponent).

n = 0 -> 2⁰ -> [1]

n = 1 -> 2⁰, 2¹ -> [1,2]

n = 2 -> 2⁰, 2¹, 2² -> [1,2,4]

Input:

powersOfTwo(0)

powersOfTwo(1)

powersOfTwo(2)

Output:

1

1,2

1,2,4

**Program**

function powersOfTwo(n){

if(n===0)

return 1;

else{

let res=[1];

for(let i=1;i<=n;i++)

res.push(Math.pow(2,i));

return res.join();

}

}

console.log(powersOfTwo(0));

console.log(powersOfTwo(1));

console.log(powersOfTwo(4));

**Output**

1

1,2

1,2,4,8,16

28. Find the maximum number in an array of numbers

**Program:**

function findMax(ar)

{

let data =ar.reduce((max,element)=>{return (element>max)?element:max},0);

return data;

}

var ar = [-5, 10, -3, 12, -9, 5, 90, 0, 1];

var max = findMax(ar);

console.log("Max:",max);

**Output:**

90

29. Print the first 100 prime numbers

**Program:**

printPrimes(100);

// Function prints the first nPrimes numbers

function printPrimes(nPrimes)

{

var n = 0;

var i = 2;

while(n < nPrimes)

{

if (isPrime(i))

{

console.log(n, " → ", i);

n++;

}

i++;

}

}

// Returns true if a number is prime

function isPrime(n)

{

let flag=0;

for(let j=3;j<n;j++)

if(n%j===0){

flag=1;

break;

}

if(flag===1)

return false;

else return true;

}

**Output:**

0 → 2

1 → 3

2 → 4

3 → 5

4 → 7

5 → 11

6 → 13

7 → 17

8 → 19

9 → 23

10 → 29

11 → 31

12 → 37

13 → 41

14 → 43

15 → 47

16 → 53

17 → 59

18 → 61

19 → 67

20 → 71

21 → 73

22 → 79

23 → 83

24 → 89

25 → 97

26 → 101

27 → 103

28 → 107

29 → 109

30 → 113

31 → 127

32 → 131

33 → 137

34 → 139

35 → 149

36 → 151

37 → 157

38 → 163

39 → 167

40 → 173

41 → 179

42 → 181

43 → 191

44 → 193

45 → 197

46 → 199

47 → 211

48 → 223

49 → 227

50 → 229

51 → 233

52 → 239

53 → 241

54 → 251

55 → 257

56 → 263

57 → 269

58 → 271

59 → 277

60 → 281

61 → 283

62 → 293

63 → 307

64 → 311

65 → 313

66 → 317

67 → 331

68 → 337

69 → 347

70 → 349

71 → 353

72 → 359

73 → 367

74 → 373

75 → 379

76 → 383

77 → 389

78 → 397

79 → 401

80 → 409

81 → 419

82 → 421

83 → 431

84 → 433

85 → 439

86 → 443

87 → 449

88 → 457

89 → 461

90 → 463

91 → 467

92 → 479

93 → 487

94 → 491

95 → 499

96 → 503

97 → 509

98 → 521

99 → 523

30.Create a function that will return in an array the first “nPrimes” prime numbers greater than a particular number “startAt”.

**Program**

console.log(getPrimes(10, 100));

function getPrimes(nPrimes, startAt)

{

let res=[];

let i=startAt;count=0;

while(count<nPrimes){

if(isPrime(i)){

res.push(i);

count++;

}

i++;

}

return res;

}

// Returns true if a number is prime

function isPrime(n)

{

let flag=0;

for(let j=3;j<n;j++)

if(n%j===0){

flag=1;

break;

}

if(flag===1)

return false;

else return true;

}

**output:**

[ 101, 103, 107, 109, 113, 127, 131, 137, 139, 149 ]

31.Reverse a string

**Program**

var s = reverseString("JavaScript");

console.log(s);

function reverseString(s)

{

let res="";let i=s.length-1;

while(i>=0){

res=res+s.charAt(i);

i--;}

return res;

}

**Output**

tpircSavaJ

32.Create a function that will merge two arrays and return the result as a new array

**Program**

var ar1 = [1, 2, 3];

var ar2 = [4, 5, 6];

var ar = mergeArrays(ar1, ar2);

console.log(ar);

function mergeArrays(ar1, ar2)

{

var result = [];

//this will add the first array to the result array

for(let el of ar1)

{

result.push(el);

}

for(let el of ar2)

{

result.push(el);

}

return result;

}

**Output**

[ 1, 2, 3, 4, 5, 6 ]

33.Calculate the sum of numbers received in a comma delimited string

**Program:**

console.log(sumCSV("1.5, 2.3, 3.1, 4, 5.5, 6, 7, 8, 9, 10.9"));

function sumCSV(s)

{

let input=s.split(",").map(Number);

let sum=input.reduce(function(old,current){return old=old+current},0);

return sum;

}

**Output**

57.3