

1) This code does not execute properly. Try to figure out why.

Ans:-

```
function multiply(a, b){  
    return a * b;  
}
```

2)The function is not returning the correct values. Can you figure out why?

Example (Input --> Output):

3 --> "Earth"

Ans:-

```
function getPlanetName(id){  
    var name;  
    switch(id){  
        case 1:  
            name = 'Mercury'  
            break;  
        case 2:  
            name = 'Venus'  
            break;  
        case 3:  
            name = 'Earth'  
            break;  
        case 4:  
            name = 'Mars'  
            break;  
        case 5:  
            name = 'Jupiter'  
            break;
```

```
case 6:
    name = 'Saturn'
    break;
case 7:
    name = 'Uranus'
    break;
case 8:
    name = 'Neptune'
}

return name;
}
```

3) Complete the solution so that it reverses the string passed into it.

'world' => 'dlrow'

'word' => 'drow'

Ans:-

```
function solution(str){
    p="";
    for (i=0;i<str.length;i++){
        p+=str[str.length-i-1];
    }
    return p;
}
```

4) Create a function that takes an integer as an argument and returns "Even" for even numbers or "Odd" for odd numbers.

Ans:-

```
function evenOrOdd(number) {  
  if (number%2==0)  
  
    return "Even";  
  
  return "Odd";  
  
}
```

5) Consider an array/list of sheep where some sheep may be missing from their place. We need a function that counts the number of sheep present in the array (true means present).

For example,

```
[true, true, true, false,  
  true, true, true, true ,  
  true, false, true, false,  
  true, false, false, true ,  
  true, true, true, true ,  
  false, false, true, true]
```

The correct answer would be 17.

Hint: Don't forget to check for bad values like null/undefined

Ans:-

```
function countSheeps(sheep) {  
  
  // TODO
```

```

var c=0;

for(var i of sheep)
    if (i==true)
        c+=1;

return c;
}

```

6) Return the number (count) of vowels in the given string.

We will consider a, e, i, o, u as vowels for this Kata (but not y).

The input string will only consist of lower case letters and/or spaces.

Ans:-

```

function getCount(str) {
    var c=0;
    for (var i of str){

        if ((i=='a') || (i=='e') || (i=='i') || (i=='o') || (i=='u') || (i=='A') || (i=='E') || (i=='I') || (i=='O') || (i=='U'))
        {
            c+=1;

        } }

    return c;
}

```

7) Jenny has written a function that returns a greeting for a user. However, she's in love with Johnny, and would like to greet him slightly different. She added a special case to her function, but she made a mistake.

Ans:-

```
function greet(name){
  if(name === "Johnny")
    return "Hello, my love!";
  return "Hello, " + name + "!";
}
```

8) Create a function that checks if a number n is divisible by two numbers x AND y . All inputs are positive, non-zero numbers.

Examples:

- 1) $n = 3, x = 1, y = 3 \Rightarrow$ true because 3 is divisible by 1 and 3
- 2) $n = 12, x = 2, y = 6 \Rightarrow$ true because 12 is divisible by 2 and 6
- 3) $n = 100, x = 5, y = 3 \Rightarrow$ false because 100 is not divisible by 3
- 4) $n = 12, x = 7, y = 5 \Rightarrow$ false because 12 is neither divisible by 7 nor 5

REFACTORING

Ans:-

```
function isDivisible(n, x, y) {
  if ((n%x==0 )&& (n%y==0))
    return true;
  return false;
}
```

9) In this simple assignment you are given a number and have to make it negative. But maybe the number is already negative?

Examples

`makeNegative(1); // return -1`

`makeNegative(-5); // return -5`

`makeNegative(0); // return 0`

`makeNegative(0.12); // return -0.12`

Notes

The number can be negative already, in which case no change is required.

Zero (0) is not checked for any specific sign. Negative zeros make no mathematical sense.

Ans:-

```
function makeNegative(num) {  
  // Code?  
  if (num <= 0) return num;  
  return -num  
}
```

10)

Given an array of integers your solution should find the smallest integer.

For example:

Given [34, 15, 88, 2] your solution will return 2

Given [34, -345, -1, 100] your solution will return -345

You can assume, for the purpose of this kata, that the supplied array will not be empty.

Ans:-

```
class SmallestIntegerFinder {  
  findSmallestInt(args) {
```

```

var s=99999999;
for (var i of args){
    if (i<s) s=i;
}
return s;
}
}

```

11) Write a program that finds the summation of every number from 1 to num. The number will always be a positive integer greater than 0.

For example (Input -> Output):

2 -> 3 (1 + 2)

8 -> 36 (1 + 2 + 3 + 4 + 5 + 6 + 7 + 8)

Ans:-

```

var summation = function (num) {
    // Code here
    return (num*(num+1)/2)
}

```

12) It's the academic year's end, a fateful moment of your school report. The averages must be calculated. All the students come to you and entreat you to calculate their average for them. Easy ! You just need to write a script.

Return the average of the given array rounded down to its nearest integer.

The array will never be empty.

Ans:-

```
function getAverage(marks){  
  s=0;  
  for (var i of marks)  
    s+=i;  
  return Math.floor(s/marks.length)  
}
```

13) Rock Paper Scissors

Let's play! You have to return which player won! In case of a draw return Draw!.

Examples(Input1, Input2 --> Output):

"scissors", "paper" --> "Player 1 won!"

"scissors", "rock" --> "Player 2 won!"

"paper", "paper" --> "Draw!"

Ans:-

```
const rps = (p1, p2) => {  
  if (p1==p2) return "Draw!";  
  
  let dicto={"scissors":"paper","rock":"scissors","paper":"rock"};  
  if (p1==dicto[p2])  
    return "Player 2 won!";  
  return "Player 1 won!";  
};
```


14) It's pretty straightforward. Your goal is to create a function that removes the first and last characters of a string. You're given one parameter, the original string. You don't have to worry with strings with less than two characters.

Ans:-

```
function removeChar(str){  
  //You got this!  
  return(str.slice(1,str.length-1));  
};
```

14) Your task is to create a function that does four basic mathematical operations.

The function should take three arguments - operation(string/char), value1(number), value2(number).

The function should return result of numbers after applying the chosen operation.

Examples(Operator, value1, value2) --> output

('+', 4, 7) --> 11

('-', 15, 18) --> -3

('*', 5, 5) --> 25

('/', 49, 7) --> 7

Ans:-

```
function basicOp(operation, value1, value2)  
{  
  if (operation=='+')  
    return value1+ value2;  
  if( operation=='-')  
    return value1- value2;  
  if (operation=='*')  
    return value1* value2;  
  if (operation=='/')  
    return value1/ value2;  
}
```

```
return value1* value2;

    if (operation=='/')
return value1/ value2;

}
```

15) Write a function that accepts an integer n and a string s as parameters, and returns a string of s repeated exactly n times.

Examples (input -> output)

6, "I" -> "IIIIII"

5, "Hello" -> "HelloHelloHelloHelloHello"

Ans:-

```
function repeatStr (n, s) {
    let t="";
    for (let i=0;i<n;i++)
        t+=s;
    return t;
}
```

16) Write a function to split a string and convert it into an array of words.

Examples (Input ==> Output):

"Robin Singh" ==> ["Robin", "Singh"]

"I love arrays they are my favorite" ==> ["I", "love", "arrays", "they"]

Ans:-

```
function stringToArray(string){  
  return string.split(" ");  
}
```

17) Write a function that removes the spaces from the string, then return the resultant string.

Examples:

Input -> Output

"8 j 8 mBliB8g imjB8B8 jl B" -> "8j8mBliB8gimjB8B8jlB"

"8 8 Bi fk8h B 8 BB8B B B B888 c hl8 BhB fd" -> "88Bifk8hB8BB8BBBBB888chl8BhBfd"

"8aaaaa dddd r " -> "8aaaaaddddr"

Ans:-

```
function noSpace(x){  
  var ar=x.split(" ");  
  t=""  
  for (var a of ar)  
    t+=a;  
  return t;  
}
```

18) Given an array of integers, return a new array with each value doubled.

For example:

[1, 2, 3] --> [2, 4, 6]

Ans:-

```
function maps(x){  
  return x.map(num=>num*2)  
}
```

19) A hero is on his way to the castle to complete his mission. However, he's been told that the castle is surrounded with a couple of powerful dragons! each dragon takes 2 bullets to be defeated, our hero has no idea how many bullets he should carry.. Assuming he's gonna grab a specific given number of bullets and move forward to fight another specific given number of dragons, will he survive?

Return true if yes, false otherwise :)

Ans:-

```
function hero(bullets, dragons){  
  return (bullets>=dragons*2);  
}
```

20) I'm new to coding and now I want to get the sum of two arrays... Actually the sum of all their elements. I'll appreciate for your help.

P.S. Each array includes only integer numbers. Output is a number too.

Ans:-

```
function arrayPlusArray(arr1, arr2) {  
  s=0  
  for(var i of arr1)  
    s+=i;
```

```

for(var i of arr2)
    s+=i;
return s; //something went wrong
}

```

21) Write an algorithm that takes an array and moves all of the zeros to the end, preserving the order of the other elements.

```

moveZeros([false,1,0,1,2,0,1,3,"a"]) // returns[false,1,1,2,1,3,"a",0,0]

```

Ans:-

```

function moveZeros(arr) {
    let count = 0;

    for (let i = 0; i < arr.length; i++) {
        if (arr[i] !== 0) {

            [arr[i], arr[i - count]] = [arr[i - count], arr[i]];

        }
        else {

            count++;

        }
    }
    return arr;
}

```

22) Kata Task

I have a cat and a dog.

I got them at the same time as kitten/puppy. That was humanYears years ago.

Return their respective ages now as [humanYears,catYears,dogYears]

NOTES:

humanYears >= 1

humanYears are whole numbers only

Cat Years

15 cat years for first year

+9 cat years for second year

+4 cat years for each year after that

Dog Years

15 dog years for first year

+9 dog years for second year

+5 dog years for each year after that

Ans:-

```
var humanYearsCatYearsDogYears = function(humanYears) {  
  let ca;  
  let da;  
  if(humanYears===1){  
    return [humanYears,15,15];  
  }  
  if(humanYears===2){  
    return [humanYears,24,24];  
  }  
  let ex=humanYears-2;
```

```

let ecy=ex*4;
let edy=ex*5;
return [humanYears,24+ecy,24+edy];
}

```

23) Given two arrays of strings a1 and a2 return a sorted array r in lexicographical order of the strings of a1 which are substrings of strings of a2.

Example 1:

```

a1 = ["arp", "live", "strong"]
a2 = ["lively", "alive", "harp", "sharp", "armstrong"]
returns ["arp", "live", "strong"]

```

Example 2:

```

a1 = ["tarp", "mice", "bull"]
a2 = ["lively", "alive", "harp", "sharp", "armstrong"]
returns []

```

Notes:

Arrays are written in "general" notation. See "Your Test Cases" for examples in your language.

In Shell bash a1 and a2 are strings. The return is a string where words are separated by commas.

Beware: In some languages r must be without duplicates.

Ans:-

```

function inArraySorted(a1, a2) {
  a1.sort();
  const r = [];
  for (const s of a1) {
    if (inArray(s, a2)) {
      r.push(s);
    }
  }
}

```

```
}  
    return r;  
}
```

24) Our football team has finished the championship.

Our team's match results are recorded in a collection of strings. Each match is represented by a string in the format "x:y", where x is our team's score and y is our opponents score.

For example: ["3:1", "2:2", "0:1", ...]

Points are awarded for each match as follows:

if $x > y$: 3 points (win)

if $x < y$: 0 points (loss)

if $x = y$: 1 point (tie)

We need to write a function that takes this collection and returns the number of points our team (x) got in the championship by the rules given above.

Notes:

our team always plays 10 matches in the championship

$0 \leq x \leq 4$

$0 \leq y \leq 4$

Ans:-

```
function points(games) {  
    s=0  
    for (var i of games){  
        p=i.split(":");
```



```
    if (p[0]>p[1])
        s+=3;
    if (p[0]==p[1])
        s+=1;

}

return s

}
```

25)The first century spans from the year 1 up to and including the year 100, the second century - from the year 101 up to and including the year 200, etc.

Task

Given a year, return the century it is in.

Examples

1705 --> 18

1900 --> 19

1601 --> 17

2000 --> 20

Ans:-

```
function century(year) {
    return Math.ceil(year/100);
}
```