1. In a small town the population is p0 = 1000 at the beginning of a year. The population regularly increases by 2 percent per year and moreover 50 new inhabitants per year come to live in the town. How many years does the town need to see its population greater or equal to p = 1200 inhabitants?

function nbYear(p0, percent, aug, p) {

var n=0, decimal=percent/100, result;

while(result<=p){

result=p0+(p0\*decimal)+aug;

n++;

p0=result;

}

console.log(result);

}

1. Convert number to reversed array of digits

348597 => [7,9,5,8,4,3]

function digitize(n) {

var remainder,quotient;

let finalArr=[ ];

while(quotient!=0){

quotient=Math.floor(n/10);

remainder=Math.floor(n%10);

n=quotient;

finalArr.push(remainder);

}

return finalArr;

}

1. Nathan loves cycling. Because Nathan knows it is important to stay hydrated, he drinks 0.5 litres of water per hour of cycling.

You get given the time in hours and you need to return the number of litres Nathan will drink, rounded to the smallest value.

function litres(time) {

waterConsumed=Math.floor(time\*0.5);

return waterConsumed;

}

1. Given a string of digits, you should replace any digit below 5 with '0' and any digit 5 and above with '1'. Return the resulting string.

function fakeBin(x){

newString=x.toString();

console.log(newString);

newArray=newString.split("");

console.log(newArray);

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

if (newArray[i]<5){

newArray[i]=0;

}

else{

newArray[i]=1;

}

}

finalResult=newArray.join('');

return finalResult;

1. Deoxyribonucleic acid (DNA) is a chemical found in the nucleus of cells and carries the "instructions" for the development and functioning of living organisms.

If you want to know more <http://en.wikipedia.org/wiki/DNA>

In DNA strings, symbols "A" and "T" are complements of each other, as "C" and "G". You have function with one side of the DNA (string, except for Haskell); you need to get the other complementary side. DNA strand is never empty or there is no DNA at all (again, except for Haskell).

function DNAStrand(dna){

arrDna=dna.split('');

//console.log(arrDna);

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

if(arrDna[i]=='T'){

arrDna[i]='A';

}

else if(arrDna[i]=='A'){

arrDna[i]='T';

}

else if(arrDna[i]=='C'){

arrDna[i]='G';

}

else if(arrDna[i]=='G'){

arrDna[i]='C';

}

}

finalResult=arrDna.join('');

return(finalResult);

}

5. Due to another of his misbehaved, the primary school's teacher of the young Gauß, Herr J.G. Büttner, to keep the bored and unruly young schoolboy Karl Friedrich Gauss busy for a good long time, while he teaching arithmetic to his mates, assigned him the problem of adding up all the whole numbers from 1 through a given number n.

Your task is to help the young Carl Friedrich to solve this problem as quickly as you can; so, he can astonish his teacher and rescue his recreation interval.

Here's, an example:

f(n=100) // returns 5050

It's your duty to verify that n is a valid positive integer number. If not, please, return false (None for Python, null for C#).

function f(n){

if(n<=0 || isNaN(n)|| (Number.isInteger(n)==false)){

return false;

} else if (n>0){

sum=n\*(n+1)/2;

return sum;

}

}

6. Remove a exclamation mark from the end of string. For a beginner kata, you can assume that the input data is always a string, no need to verify it.

# Examples

remove("Hi!") === "Hi"

remove("Hi!!!") === "Hi!!"

remove("!Hi") === "!Hi"

remove("!Hi!") === "!Hi"

remove("Hi! Hi!") === "Hi! Hi"

remove("Hi") === "Hi"

function remove(s){

var lengthOfS=s.length;

console.log(lengthOfS);

if (s.endsWith("!")==true) {

newS=s.substring(0,lengthOfS-1);

return newS;

} else{

return s;

}

}

}