

## CALCULATOR 36

<https://www.hackerrank.com/contests/fs-16-java-dsa-class-challenges/challenges/calculator-36>

APPROACH ->

SABSE PHELE CHECK KARO KI LAST ELEMNT ME JO ELEMNT MILA HAI USE ADD ME KARNE PE 9 SE BADA HAI KYA

COZ AGAR 9 SE BADA HOGA TABHI AAG WALE NUMMBER ME CARRY ADD HOGA WARNA TO SIMPLE LAST WALE ELEMENT ME ADD KARO AND RETURN KARDO

EX->1,2,3,4.

ADD->6 -> TO 6+4 ->9 SE CHOTA HAI DEN NO CARRY

ANS = 1,2,3,9

AGAR ELEMNT 9 SE BADA TO CARRY CALCULATE KARO AND ADD KARTE JAB TAK CARRY 0 NA HOJYE YA FIR AARRAY KE BAHAR NA AAJO ie  $idx \geq 0$

Ex = 1,2,9,9,9

Ad-> 9

1,2,9,9,9+9=18. =>8 element ->carry =1;  $idx=n-1$ ;

1,2,9,9+1,8 => 9+1=10 ele=> 0 carry =1.  $idx=n-2$ ;

1,2,9+1,0,8 => 9+1=10 ele => 0, carry=> 1,  $idx=n-3$ ;

1,2+1,0,0,8 => 2+3 <9 ele =5 carry==0  $idx=n-4$

Loop over;

Lekin agar sare elemnt 9 hue to hamara number 1 digit badh jayega uske liye alag se chack karle loop le baaad ki carry ==0 nhi hai to sataring me carry ko hi print kar do then array;

Ex= 9,9,9;

Add= 9;

9,9,9+9 => 9+9 =18 => ele =8 carry=>1;

9,9+1,8. => 9+1=10 =>ele =0 carry =1;

9+1,0,8=> 9+1 =10 => ele =0 carry =1;

0,0,8. Carry still 1 but idx out of range;

Print carry and then array;

```
language: java 1.8
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
8         Scanner scn=new Scanner(System.in);
9         int n=scn.nextInt();
10        int arr[]=new int[n];
11        for(int i=0;i<n;i++){
12            arr[i]=scn.nextInt();
13        }
14        int x=scn.nextInt();
15        int fst=arr[n-1]+x;
16
17        if(fst>9){
18            int m=fst%10;
19            int c=fst/10;
20            arr[n-1]=m;
21            int idx=n-2;
22            while(c!=0 && idx>=0){
23                int ele=arr[idx]+c;
24                arr[idx]=ele%10;
25                c=ele/10;
26                idx--;
27            }
28            if(c!=0){
29                System.out.print(c+" ");
30                for(int i=0;i<n;i++){
31                    System.out.print(arr[i]+" ");
32                }
33            }else{
34                for(int i=0;i<n;i++){
35                    System.out.print(arr[i]+" ");
36                }
37            }
38        }
39
40        }else{
41            arr[n-1]=arr[n-1]+x;
42            for(int i=0;i<n;i++){
43                System.out.print(arr[i]+" ");
44            }
45        }
46    }
47
48 }
```