\*\*zip all codes ( name should be p1,p2,p3…pn ) and also write down the question on top of the code shortly…it’ll be easy to review the code..

**Problem 1**

Write a program to find x to the power n (i.e. x^n). Take x and n from the user. You need to return the answer.

Do this recursively.

Input format :

Two integers x and n (separated by space)

Output Format :

x^n (i.e. x raise to the power n)

Constraints :

1 <= x <= 30

0 <= n <= 30

**Sample Input 1 :**

**3 4**

**Sample Output 1 :**

**81**

**Sample Input 2 :**

**2 5**

**Sample Output 2 :**

**32**

**Problem 2**

Print numbers from 1 to n in increasing order recursively.

Input Format :

Integer n

Output Format :

Numbers from 1 to n (separated by space)

Constraints :

1 <= n <= 10000

**Sample Input 1 :**

**6**

**Sample Output 1 :**

**1 2 3 4 5 6**

**Sample Input 2 :**

**4**

**Sample Output 2 :**

**1 2 3 4**

**Problem 3**

Number of Digits

Write a recursive function to calculate digits of a number.

Input Format :

Integer n

Output Format :

Count of digits

Constraints :

1 <= n <= 10^6

**Sample Input 1 :**

**156**

**Sample Output 1 :**

**3**

**Sample Input 2 :**

**7**

**Sample Output 2 :**

**1**

**Problem 4**

Number of Digits

Write a recursive function to calculate digits of a number.

Input Format :

Integer n

Output Format :

Count of digits

Constraints :

1 <= n <= 10^6

**Sample Input 1 :**

**156**

**Sample Output 1 :**

**3**

**Sample Input 2 :**

**7**

**Sample Output 2 :**

**1**

**Problem 5**

Sum of Array

Given an array of length N, you need to find and return the sum of all elements of the array.

Do this recursively.

Input Format :

Line 1 : An Integer N i.e. size of array

Line 2 : N integers which are elements of the array, separated by spaces

Output Format :

Sum

Constraints :

1 <= N <= 10^3

**Sample Input 1 :**

**3**

**9 8 9**

**Sample Output 1 :**

**26**

**Sample Input 2 :**

**3**

**4 2 1**

**Sample Output 2 :**

**7**

**Problem 6**

Check Number

Given an array of length N and an integer x, you need to find if x is present in the array or not. Return true or false.

Do this recursively.

Input Format :

Line 1 : An Integer N i.e. size of array

Line 2 : N integers which are elements of the array, separated by spaces

Line 3 : Integer x

Output Format :

'true' or 'false'

Constraints :

1 <= N <= 10^3

**Sample Input 1 :**

**3**

**9 8 10**

**8**

**Sample Output 1 :**

**True**

**Sample Input 2 :**

**3**

**9 8 10**

**2**

**Sample Output 2 :**

**false**

**Problem 7**

First Index of Number

Given an array of length N and an integer x, you need to find and return the first index of integer x present in the array. Return -1 if it is not present in the array.

First index means, the index of first occurrence of x in the input array.

Do this recursively. Indexing in the array starts from 0.

Input Format :

Line 1 : An Integer N i.e. size of array

Line 2 : N integers which are elements of the array, separated by spaces

Line 3 : Integer x

Output Format :

first index or -1

Constraints :

1 <= N <= 10^3

**Sample Input :**

**4**

**9 8 10 8**

**8**

**Sample Output :**

**1**

**Problem 8**

Last Index of Number

Given an array of length N and an integer x, you need to find and return the last index of integer x present in the array. Return -1 if it is not present in the array.

Last index means - if x is present multiple times in the array, return the index at which x comes last in the array.

You should start traversing your array from 0, not from (N - 1).

Do this recursively. Indexing in the array starts from 0.

Input Format :

Line 1 : An Integer N i.e. size of array

Line 2 : N integers which are elements of the array, separated by spaces

Line 3 : Integer x

Output Format :

last index or -1

Constraints :

1 <= N <= 10^3

**Sample Input :**

**4**

**9 8 10 8**

**8**

**Sample Output :**

**3**

**Problem 9**

Last Index of Number

All Indices of Number

Given an array of length N and an integer x, you need to find all the indexes where x is present in the input array. Save all the indexes in an array (in increasing order).

Do this recursively. Indexing in the array starts from 0.

Input Format :

Line 1 : An Integer N i.e. size of array

Line 2 : N integers which are elements of the array, separated by spaces

Line 3 : Integer x

Output Format :

indexes where x is present in the array (separated by space)

Constraints :

1 <= N <= 10^3

**Sample Input :**

**5**

**9 8 10 8 8**

**8**

**Sample Output :**

**1 3 4**