Problem 01

You are given a positive integer n. The second line will contain n positive integers. The third line will contain a value k. Now print the total count of strictly less and strictly greater value from k. Implement it using function.
Note – In the given input, there may exist duplicate value.

Sample Input :

```
7

1 2 5 5 9 2 3

5
```

Sample Output :

```
5
```

Problem 02

Write a C program to take one positive integer **N**, the size of an array as input. Then take a positive integer array of size **N** . And the next line will contain k . Now find the k-th largest and kth-smallest element from the array.

Implement it using function. And try to implement it using 3 functions .1st one is for sorting , second one for finding k-th largest element and third one for finding the kth- smallest element.

See the sample output for more clarification.

Note – 1<=k<=N

Sample Input :

9

2 17 1 1 3 2 5 19 5

4

Sample Output :

4th largest element = 5

4th smallest element = 2

Problem 03

You are given a string S of small letters , Now calculate the cost of the string and tell that whether the cost of the string is a power of two or not.
In this problem cost means the sum of the alphabetic order of the given string. Alphabetic order means
a = 1 , b = 2 , c = 3 ……. z = 26
And, power of two is a number of the form 2^n (2 to the power n) where n is an integer.
Now ,If the cost is a power of two print YES with cost (in this format 2^n) otherwise print NO.
Implement it using function.

Sample Input 1:
abc

Sample Output 1:
NO

Sample Input 2:
bbca

Sample Output 2:
YES
cost = 2^3

Problem 04

You are given an integer n . Now print n to 1 . Implement it using recursion.

Sample Input :

4

Sample Output :

4 3 2 1

Problem 05

You are given an integer n . Now print the sum of first n natural numbers.
For example n=5 , that means sum of first n natural number is 15(1+2+3+4+5) . Implement it using recursion.

Sample Input:

5

Sample Output:

15

Problem 06

You are given 3 integers a, b and c . Now print the sum of three numbers using the concept of pointer in C.

Sample Input :
10 20 30

Sample Output :
60

Codeforces Problem Link –

1) https://codeforces.com/contest/1560/problem/A
2) https://codeforces.com/contest/1608/problem/A
3) https://codeforces.com/contest/1680/problem/A