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ECE D

Questiontext1

Codershere is a simple task for you, you have given an array of size N and an integer M.

Yourtaskistocalculatethe *difference between maximum sum and minimum sum of N-M* elements of the given array.

Constraints:

1<=t<=10

1 <= n <= 1000

1<=a[i]<=1000

Input:

Firstline contains an integer T denoting the number of test cases. First line of every test case contains two integer N and M.

Nextlinecontains N spaces eparated integers denoting the elements of array

Output:

Foreverytest case printy our answer in new line SAMPLE

INPUT

1

51

12345

SAMPLEOUTPUT

764

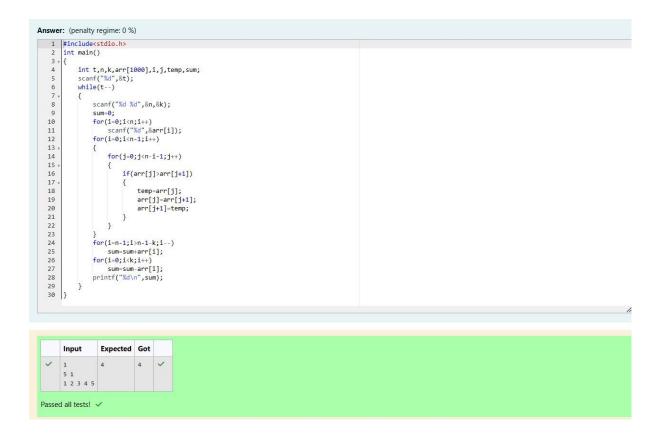
Explanation

Mis1andNis5soyouhavetocalculatemaximumandminimum sum using (5-1 =) 4 elements.

Maximumsumusingthe4elementswouldbe(2+3+4+5=)14.

Minimum sum using the 4 elements would be (1+2+3+4=)10.

Difference will be 14-10=4



Questiontext2

Anewdeadlyvirushasinfectedlargepopulationofaplanet. A brilliant scientist has discovered a new strain of virus whichcancurethisdisease. Vaccineproducedfromthisvirushas various strength depending on midichlorians count. A personiscuredonlyifmidichlorianscountinvaccinebatchismore than midichlorians count of person. A doctor receivesanewsetofreportwhichcontainsmidichlorianscountof each infected patient, Practo stores all vaccine doctorhasandtheirmidichlorianscount. Youneedtodetermineif doctor can save all patients with the vaccines he has. Thenumberofvaccinesandpatientsareequal.

InputFormat

Firstlinecontainsthenumberofvaccines-N.SecondlinecontainsN integers, which are strength of vaccines. Third linecontainsNintegers, which are midichlorians count of patients.

OutputFormat

Printasinglelinecontaining 'Yes' or 'No'.

InputConstraint

1<N<10

Strengthofvaccinesandmidichlorianscountofpatientsfitininteger.

SAMPLEINPUT

5

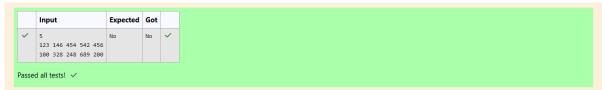
123146454542456

100328248689200

SAMPLEOUTPUT

No

```
1 |#include<stdio.h>
             int n,i;
int canCure=1;
scanf("%d",&n);
int vaccines[n],patients[n];
for(int i=0;i<n;i++)
    scanf("%d",&vaccines[i]);
for(i=0;i<n;i++)
    scanf("%d",&patients[i]);
for(i=0;i<n-1;i++)</pre>
                      for(int j=0;j<n-i-1;j++)
14
15
16
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22
23
24
25
26
27
28
29
30
31
                             if(vaccines[j]>vaccines[j+1])
                                     vaccines[j]=vaccines[j+1];
vaccines[j+1]=temp;
                               if(patients[j]>patients[j+1])
                                     int temp=patients[j];
                                      patients[j]=patients[j+1];
                                      patients[j+1]=temp;
                for(i=0;i<n;i++)
                       if(vaccines[i]<=patients[i])</pre>
32
33
34
35
36
37
38
39
40
41
                               canCure=0;
                              break;
             }
if (canCure){
    printf("Yes\n");
}else{
    printf("No\n");
```



Questiontext3

Youaregivenanarrayofnintegernumbers a1,a2,...,an. Calculate the number of pair of indices (i,j) such that $1 \le$

*i<j≤n*and*ai*xor*aj=0*.

Inputformat

- Firstline: *n* denoting the number of array elements
- Secondline:nspaceseparatedintegersa1,a2,...,an.

Output format

Outputtherequirednumber of pairs.

Constraints

1≤n≤106

 $1 \le ai \le 109$

SAMPLEINPUT

5

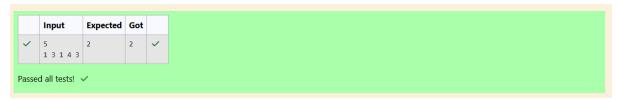
13143

SAMPLEOUTPUT

2

Explanation

The2pairofindicesare(1,3)and(2,5)



Questiontext4

Youaregivenanarray Aofnon-negative integers of size m. Yourtask is to sort the array in non-decreasing order and printout the original indices of the newsorted array.

Example:

 $A = \{4,5,3,7,1\}$

Aftersortingthenewarraybecomes A={1,3,4,5,7}. The required output should be "4 2 0 1 3"

INPUT:

The first line of input consists of the size of the array of size m **OUTPUT**: Output consists of a single line of integers

CONSTRAINTS:

1 <= m <= 106

0 < =A[i] < =106

NOTE: The indexing of the array starts with 0.

SAMPLEINPUT

5

45371

SAMPLEOUTPUT

42013

```
#include(stdio.h>
int main()

{
    int m, a[100000], b[100000], i, j, temp;
    scanf("%d", %m);
    for(int i=0;icm;i++)
    {
        scanf("%d", %a[i]);
        b[i]=i;
    }
    for(j=0;i<m-1;i++)
    {
        if(a[j]>a[j+1])
        {
            temp=a[j];
            a[j]=a[j+1];
            a[j]=a[j+1];
            a[j]=a[j+1];
            a[j]=b[j+1];
            b[j]=b[j+1];
            b[j+1]=temp;
            canf("%d",b[i]);
            b[i]=b[j+1];
            b[j+1]=temp;
            canf("%d",b[i]);
            b[i]=b[j+1];
            b[i]=b
```