Week 8

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Status	Finished
Started	Monday, 30 December 2024, 9:41 AM
Completed	Monday, 30 December 2024, 10:54 AM
Duration	1 hour 12 mins

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

Your task is to calculate the *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:

First line contains an integer **T** denoting the number of testcases.

First line of every testcase contains two integer N and M.

Next line contains **N** space separated integers denoting the elements of array

Output:

For every test case print your answer in new line
SAMPLE INPUT
1
51
12345
SAMPLE OUTPUT
4
Explanation
M is 1 and N is 5 so you have to calculate maximum and minimum sum using $(5-1 =) 4$ elements.
Maximum sum using the 4 elements would be (2+3+4+5=)14.
Minimum sum using the 4 elements would be (1+2+3+4=)10.
Difference will be 14-10=4.
Answer:(penalty regime: 0 %)

```
#include <stdio.h>
 2 v int main(){
         int t;
 3
 4
         scanf("%d",&t);
 5
         while(t--)
 6 ,
             int n,m,d,min,temp;
 7
 8
             scanf("%d %d",&n,&m);
 9
             d=n-m;
10
             int arr[n];
             for(int i=0;i<n;i++)</pre>
11
12
             scanf("%d",&arr[i]);
13
             for(int j=0;j<n;j++)</pre>
14 🔻 {
15
             min=j;
16
             for(int k=j;k<n;k++)</pre>
17 *
             if(arr[k]<arr[min])</pre>
18
19
             min=k;
20
21
22
             temp=arr[min];
23
             arr[min]=arr[j];
24
             arr[j]=temp;
25
             int maxsum=0,minsum =0;
26
27
             for(int a=0;a<d;a++)</pre>
28
             minsum+=arr[a];
29
             for( int b=n-1;b>m-1;b--)
30
             maxsum+=arr[b];
             printf("%d\n",maxsum-minsum);
31
32
33
```

	Input	Expected	Got	
~	1	4	4	~
	5 1			
	1 2 3 4 5			

Passed all tests! <

A new deadly virus has infected large population of a planet. A brilliant scientist has discovered a new strain of virus which can cure this disease. Vaccine produced from this virus has various strength depending on midichlorians count. A person is cured only if midichlorians count in vaccine batch is more than midichlorians count of person. A doctor receives a new set of report which contains midichlorians count of each infected patient, Practo stores all vaccine doctor has and their midichlorians count. You need to determine if doctor can save all patients with the vaccines he has. The number of vaccines and patients are equal.

Input Format

First line contains the number of vaccines - N. Second line contains N integers, which are strength of vaccines. Third line contains N integers, which are midichlorians count of patients.

Output Format

Print a single line containing 'Yes' or 'No'.

Input Constraint

1 < N < 10

Strength of vaccines and midichlorians count of patients fit in integer.

SAMPLE INPUT

5

123 146 454 542 456

1	$\cap \cap$	328	248	689	200

SAMPLE OUTPUT

No

Answer:(penalty regime: 0 %)

```
#include<stdio.h>
    #include<stdlib.h>
 2
 3
    int compare(const void*a,const void*b){
 4 *
         return(*(int*)a-*(int*)b);
 5
 6
 7 v int main(){
        int n;
 8
         scanf("%d",&n);
 9
10
         int vac[n],mid[n];
11
         for(int i=0;i<n;i++)</pre>
12
         scanf("%d",&vac[i]);
13
14
         for(int i=0;i<n;i++)</pre>
15
         scanf("%d",&mid[i]);
16
    qsort(vac,n,sizeof(int),compare);
    qsort(mid,n,sizeof(int),compare);
17
         for(int i=0;i<n;i++)</pre>
18
         if(vac[i]<=mid[i]) return printf("No\n"),0;</pre>
19
          printf("Yes\n");
20
21
          return 0;}
```

		Input	Expected	Got	
	~	5 123 146 454 542 456 100 328 248 689 200	No	No	~
F	Passed	d all tests! 🗸			

You are given an array of n integer numbers a_1, a_2, \ldots, a_n . Calculate the number of pair of indices (i, j) such that $1 \le i < j \le n$ and a_i xor $a_j = 0$.

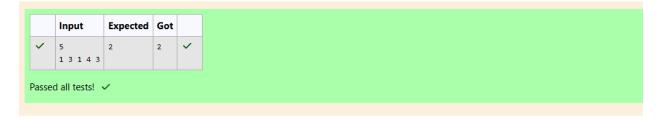
Input format

- First line: *n* denoting the number of array elements

- Second line: n space separated integers a_1, a_2, \ldots, a_n .
Output format
Output the required number of pairs.
Constraints
$1 \le n \le 10^6$
$1 \leq a_i \leq 10^9$
SAMPLE INPUT
5
13143
SAMPLE OUTPUT
2
Explanation
The 2 pair of indices are <i>(1, 3)</i> and <i>(2,5)</i> .

Answer:(penalty regime: 0 %)

```
1 #include <stdio.h>
    #include <stdlib.h>
    #include <string.h>
 3
4 #define MAX 1000003
6 typedef struct {int key,value;} HashEntry;
    HashEntry hashTable[MAX];
7
   int hash(int key){return(key % MAX + MAX)% MAX;}
8
9
10 +
      int n,paircount =0,*arr;
11
       scanf("%d",&n);
12
       arr=malloc(n * sizeof(int));
13
      for (int i = 0; i<n;i++)scanf("%d",&arr[i]);</pre>
14
15
       memset(hashTable,0,sizeof(hashTable));
16
       for (int i=0;i<n;i++){</pre>
17 +
18
           int idx = hash(arr[i]);
            while(hashTable[idx].key && hashTable[idx].key !=arr[i])
20
           idx = (idx + 1)\%MAX;
21 paircount += hashTable[idx].key ? hashTable [idx].value++ : (hashTable[idx]=(HashEntry){arr[i],1},0);
22 }printf("%d\n",paircount);
23
    free(arr);
24
    return 0;
25
26
```

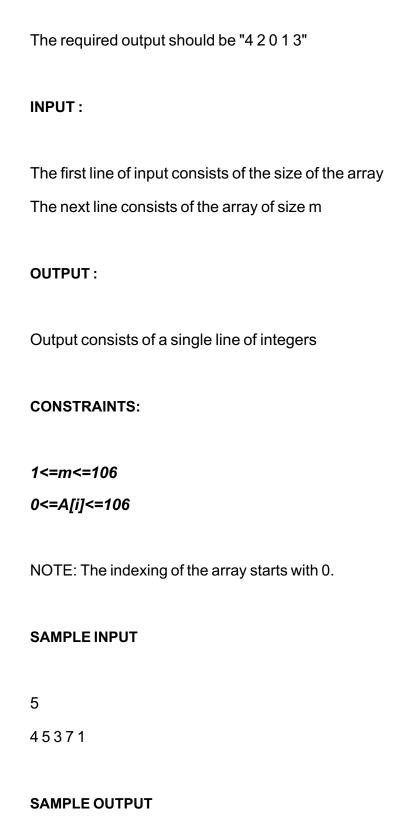


You are given an array **A** of non-negative integers of size **m**. Your task is to sort the array in non-decreasing order and print out the original indices of the new sorted array.

Example:

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

After sorting the new array becomes A={1,3,4,5,7}.



Answer:(penalty regime: 0 %)

```
#include <stdib.h>
#include <stdio.h>

typedef struct{
    int value,index;
}Element;

**int compare(const void*a,const void*b){
    return((Element*)a)->value-((Element*)b)->value;

**int main(){
    int m;
    scanf("%d",8m);

#int Element arr[m];
for(int i=0;i\array;i++){
    scanf("%d",8arr[i].value);
    arr[i].index = i;
    }

#include <stdib.h>
#include <stdib.h
#include <stdib.h>
#include <stdib.h>
#include <stdib.h>
#include <stdib.h
#in
```

	Input	Expected	Got	
	5 4 5 3 7 1	4 2 0 1 3	4 2 0 1 3	~
Passed all tests! ✓				