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| **Drawing Contest**  **Solved**  Problem code: KGP14A | * [SUBMIT](https://www.codechef.com/submit/KGP14A) * [MY SUBMISSIONS](https://www.codechef.com/status/KGP14A,nacho0monllor) * [ALL SUBMISSIONS](https://www.codechef.com/status/KGP14A) |

**All submissions for this problem are available.**

Liliputs are holding a drawing competition for K kids, but with K human-sized pencils stolen from humans. In order to make life easier for the kids, the organizers want to give a pencil to each kid in a way such that the sum of the absolute differences of the height of a kid and the length of the pencil assigned to him/her is minimized. What is the minimum sum of absolute differences that can be achieved?

**Input**

The first line contains the number of test cases **N (0 < N ≤ 3)**.

For each test case, the first line contains the number of kids and pencils K (0 < K ≤ 100). The second line contains K positive integers, each containing the height in millimeter of a kid. The third line contains K positive integers, each containing the length in millimeter of a pencil.

**Output**

For each test case, print the case number, followed by a colon, followed by a single space, followed by a single integer indicating the minimum sum of absolute differences achieved (in millimeter).

**Sample Input**

2

5

51 60 51 72 70

65 60 88 72 88

4

123 234 188 175

219 334 122 233

**Sample Output**

Case 1: 69

Case 2: 190

<https://www.codechef.com/problems/KGP14A>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace ConsoleApplication1

{

class Program

{

static void Main(string[] args)

{

int N = int.Parse(Console.ReadLine());

int caso = 1;

while (N-- > 0)

{

int k = int.Parse(Console.ReadLine());

string[] elemN = Console.ReadLine().Split(' ');

int[] ni = Array.ConvertAll(elemN, e => int.Parse(e));

string[] elemLap = Console.ReadLine().Split(' ');

int[] lapices = Array.ConvertAll(elemLap, e => int.Parse(e));

Array.Sort(ni);

Array.Sort(lapices);

int sum = 0;

for (int i = 0; i < k; i++)

{

sum += Math.Abs(ni[i] - lapices[i]);

}

Console.WriteLine("Case {0}: {1}",caso++, sum);

}

Console.ReadLine();

}

}

}