**Find difference between sum of diagonals**

Submissions: [1187](https://practice.geeksforgeeks.org/problem_submissions.php?pid=1784)  Accuracy:

57.29%

   Difficulty: [School](https://practice.geeksforgeeks.org/School/0/0/)   Marks: 0

\*School Problem's Submission isn't counted in score!

Associated Course(s): [Fundamentals of Programming with C](https://practice.geeksforgeeks.org/courses/AKTU-First-Year/)

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Given a matrix **A[][]** of size **N X N**. The task is to calculate the absolute difference between the sums of its diagonal.  
Input: A[][] = 11 2 4  
                     4 5 6  
                    10 8 -12  
Output: 15  
Sum of primary diagonal = 11 + 5 + (-12) = 4.  
Sum of secondary diagonal = 4 + 5 + 10 = 19.  
Difference = |19 - 4| = 15.

**Input:**  
The first line of input consists of **T**, denoting number of the test cases. Then T testcases follow. The first line of every test case consists of N, denoting the size of matrix. The second line of every test case consists of N\*N spaced integers.

**Output:**  
For each test case in a single line print an integer denoting the difference between the sum of its diagonals.

**Constraints:**  
1 <= T <= 100  
1 <= N <= 50  
1 <= A[i][j] <= 100

**Example:  
Input:**  
2  
3  
11 2 4 4 5 6 10 8 -12  
4  
1 2 3 4 5 9 7 8 6 10 11 12 13 14 15 16

**Output:**  
15  
3

\*\* For More Input/Output Examples Use ['Expected Output'](https://practice.geeksforgeeks.org/problems/find-difference-between-sum-of-diagonals/0#ExpectOP) option \*\*

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<https://practice.geeksforgeeks.org/problems/find-difference-between-sum-of-diagonals/0>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.IO;

namespace ConsoleApp1

{

class Program

{

static void Main(string[] args)

{

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

while (t-- > 0)

{

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

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

int index = 0;

int[][] matrix = new int[n][];

int j = 0;

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

{

matrix[i] = new int[n];

for ( j = 0; j < n; j++)

{

matrix[i][j] = int.Parse(input[index++]);

}

}

int d1 = 0, d2 = 0;

j = n - 1;

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

{

d1 += matrix[i][i];

d2 += matrix[i][j];

j--;

}

// System.out.println(Math.abs(d1 - d2));

Console.WriteLine(Math.Abs(d1 - d2));

}

Console.ReadLine();

}

}

}