



Diagonal Difference

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Problem

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Given a square matrix of size $N \times N$, calculate the absolute difference between the sums of its diagonals.

Input Format

The first line contains a single integer, N . The next N lines denote the matrix's rows, with each line containing N space-separated integers describing the columns.

Constraints

- $-100 \leq \text{Elements in the matrix} \leq 100$

Output Format

Print the absolute difference between the two sums of the matrix's diagonals as a single integer.

Sample Input

```
3
11 2 4
4 5 6
10 8 -12
```

Sample Output

```
15
```

Explanation

The primary diagonal is:

```
11
 5
-12
```

Sum across the primary diagonal: $11 + 5 - 12 = 4$

The secondary diagonal is:

```
 4
 5
10
```

Sum across the secondary diagonal: $4 + 5 + 10 = 19$

Difference: $|4 - 19| = 15$

Note: $|x|$ is [absolute value](#) function

Submissions: [355515](#)

Max Score: 10

Difficulty: Easy

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Java 7   

```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
9     public static void main(String[] args) {
10         Scanner in = new Scanner(System.in);
11         int n = in.nextInt();
12         int a[][] = new int[n][n];
13         for(int a_i=0; a_i < n; a_i++){
14             for(int a_j=0; a_j < n; a_j++){
15                 a[a_i][a_j] = in.nextInt();
16             }
17         }
18     }
19 }
20
```

Line: 1 Col: 1

 [Upload Code as File](#)☐ Test against custom input

Run Code

Submit Code

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