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Diagonal Difference

by [vatsalchanana](#)

Problem

Submissions

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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:

```
 5
 4
10
```

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

Difference: $|4 - 19| = 15$

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

[f](#) [t](#) [in](#)Submissions: [261983](#)

Max Score: 10

Difficulty: Easy

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Current Buffer (saved locally, editable)

JavaScript ▾



```
1 process.stdin.resume();
2 process.stdin.setEncoding('ascii');
3
4 var input_stdin = "";
5 var input_stdin_array = "";
6 var input_currentline = 0;
7
8 process.stdin.on('data', function (data) {
9     input_stdin += data;
10 });
11
12 process.stdin.on('end', function () {
13     input_stdin_array = input_stdin.split("\n");
14     main();
15 });
16
17 function readLine() {
18     return input_stdin_array[input_currentline++];
19 }
20
21 /////////////// ignore above this line ///////////////
22
23 function main() {
24     var n = parseInt(readLine());
25     var a = [];
26     for(a_i = 0; a_i < n; a_i++){
27         a[a_i] = readLine().split(' ');
28         a[a_i] = a[a_i].map(Number);
29     }
30     var s1=0,s2=0;
31     for (var i=0;i<n;i++){
32         s1 += a[i][i];
33         s2 += a[n-i-1][i];
34     }
35     console.log(Math.abs(s2-s1));
36 }
37
```

Line: 1 Col: 1

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

Run Code

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