Given a square matrix, calculate the absolute difference between the sums of its diagonals.

For example, the square matrix arr is shown below:

```
1 2 3
4 5 6
9 8 9
```

The left-to-right diagonal = $1 + 5 + 9 = 15$. The right to left diagonal = $3 + 5 + 9 = 17$. Their absolute difference is $|15 - 17| = 2$.

Function description

Complete the $diagonalDifference$ function in the editor below.

diagonalDifference takes the following parameter:

- int arr[n][m]: an array of integers

Return

- int: the absolute diagonal difference

Input Format

The first line contains a single integer, n, the number of rows and columns in the square matrix arr.

Each of the next n lines describes a row, $arr[i]$, and consists of n space-separated integers $arr[i][j]$.

Constraints

- $-100 \leq arr[i][j] \leq 100$

Output Format

Return the absolute difference between the sums of the matrix's two 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 the absolute value of x

```python
#!/bin/python3

import math
import os
import random
import re
import sys

#
# Complete the 'diagonalDifference' function below.
#
# The function is expected to return an INTEGER.
# The function accepts 2D_INTEGER_ARRAY arr as parameter.
#

def diagonalDifference(arr):
    # Write your code here
    s=0
    s1=0
    x=0
    while x<len(arr):
        s=s+arr[x][x]
        s1=s1+arr[x][len(arr)-x-1]
        x=x+1
    return abs(s-s1)

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    n = int(input().strip())

    arr = []

    for _ in range(n):
        arr.append(list(map(int, input().rstrip().split())))

    result = diagonalDifference(arr)

    fptr.write(str(result) + '\n')

    fptr.close()
```

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Input (stdin) Download

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

Your Output (stdout)

```
15
```

Expected Output Download

```
15
```

You have earned 10.00 points!

You are now 69 points away from the 2nd star for your problem solving badge.

1%

31/100

Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

Test case 0

Test case 1

Test case 2

Test case 3

Test case 4

Test case 5

Test case 6

Compiler Message

```
Success
```

Input (stdin) Download

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

Expected Output Download

```
15
```