

Methodical Rocket

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

points: 100 · problem code: methodicalrocket · author: jbroeksteeg

Windra has an n by n grid of positive integers a . Windra starts at the top left (which contains $a[1][1]$). Windra will then make a series of moves, he has two choices for each move, if he is at coordinate (i, j) he can:

- Move to coordinate $(i + a[i][j], j)$
- Move to coordinate $(i, j + a[i][j])$

Note that some moves may go off the grid.

Windra's evil twin, Bindra, plots to kill Windra by setting him on a path that goes off the grid. Bindra would like to know how many paths go off the grid.

Input Format

Your first line will contain a single integer n . Your next n lines will contain n integers each, representing your row of integers in a .

Output Format

You should output a single integer representing the number of paths off the grid.

Constraints

- $1 \leq n \leq 50$
- $1 \leq a[i][j] \leq n + 1$

Template

```
n = int(input())
a = [list(map(int, input().split())) for _ in range(n)]

# print your output
```

Sample Cases

Input 1

```
2
1 1
1 1
```

Output 1

```
6
```

Explanation 1

There are the following paths:

- Down, down
- Down, right, down
- Down, right, right
- Right, down, down
- Right, down, right

- Right, right

Input 2

```
5
2 1 1 1 1
1 1 2 1 3
1 1 1 1 1
1 1 1 2 1
4 1 1 1 1
```

Output 2

59

Input 3

```
5
1 1 1 1 1
1 1 1 1 1
1 1 1 1 1
1 1 1 2 2
1 1 1 2 1
```

Output 3

142