Frisbee Retrieval

Input file	Output file	Time limit	Memory limit
stdin	stdout	0.3 seconds	64 MB

Statement

It is December Camp. The tutors are in a meeting, leaving the students to play pool, table tennis, and a strange game involving badgers. While this is entertaining for everyone else in the room, you would rather like to play frisbee. However, there is one slight complication: The only two frisbees in Canberra lie at the top of a tree guarded by a Snake, but the Snake is currently at the meeting - now is your chance to retrieve them!

You exit Burgmann Hall to find that fog has descended on the ANU Campus. This is a magical fog: You are able to move it around with a snap of your fingers. The ANU Campus can be represented as an N by N grid - rows and columns are numbered from 1 to N. You start at $(1, 1)$, and the frisbee tree is located at (N, N). At any given point in time, every cell on the grid except for two are covered in fog (one of which is the one you start on). A cell that is not covered by fog is known as empty; and a unit of fog is that which covers one cell. In 1 second, you can either move to an adjacent cell if it is empty, or move a unit of fog to an adjacent empty cell. All movements must be one cell in a cardinal direction. Neither you nor the fog can leave the grid; and you are able to move any unit of fog regardless of your position, so long as you do not move it into the cell you currently occupy or an already foggy cell.

You want to know the minimum amount of time (in seconds) you will take to reach the frisbee tree.

Input

The first line of input contains N.

The second line of input contains X and Y, the row and column respectively of the other empty cell on the grid.

Output

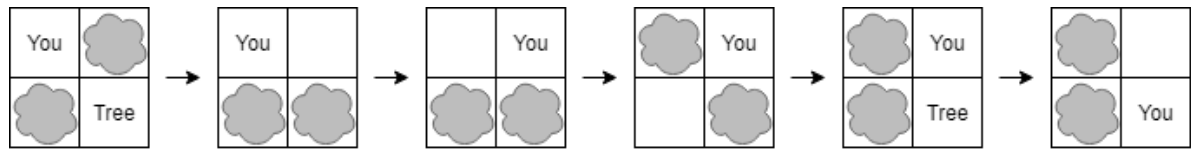Output one integer: The number of seconds you will take to reach the frisbee tree.

Sample Input

```
2
2  2
```

Sample Output

5

Visualisation of Sample

Please note: There may be alternate ways of reaching an answer of 5.

Constraints

- $2 \leq N \leq 35$
- $1 \leq X, Y \leq N$ for all i

Subtasks

Number	Points	Additional Constraints
1	20	$N = 2$
2	20	$N \leq 10$
3	60	No further constraints