Castle on the Grid

HackerRank

You are given a square grid with some cells open (**.**) and some blocked (**X**). Your playing piece can move along any row or column until it reaches the edge of the grid or a blocked cell. Given a grid, a start and a goal, determine the minmum number of moves to get to the goal.

Example.

$grid = [\text{'...','.X.','...'}]$
$startX = 0$
$startY = 0$
$goalX = 1$
$goalY = 2$

The grid is shown below:

```
...
.X.
...
```

The starting position $(startX, startY) = (0, 0)$ so start in the top left corner. The goal is $(goalX, goalY) = (1, 2)$. The path is $(0, 0) \rightarrow (0, 2) \rightarrow (1, 2)$. It takes 2 moves to reach the goal.

Function Description
Complete the *minimumMoves* function in the editor.

minimumMoves has the following parameter(s):

- *string grid[n]:* an array of strings that represent the rows of the grid
- *int startX:* starting X coordinate
- *int startY:* starting Y coordinate
- *int goalX:* ending X coordinate
- *int goalY:* ending Y coordinate

Returns

- *int:* the minimum moves to reach the goal

Input Format

The first line contains an integer n, the size of the array *grid*.
Each of the next n lines contains a string of length n.
The last line contains four space-separated integers, $\text{startX}, \text{startY}, \text{goalX}, \text{goalY}$

Constraints

- $1 \leq n \leq 100$

- $0 \le startX,\ startY,\ goalX,\ goalY < n$

Sample Input

```
STDIN       FUNCTION
-----       --------
3           grid[] size n = 3
.X.         grid = ['.X.','.X.', '...']
.X.
...
0 0 0 2     startX = 0, startY = 0, goalX = 0, goalY = 2
```

Sample Output

```
3
```

Explanation

Here is a path that one could follow in order to reach the destination in 3 steps:

$(0,0) \to (2,0) \to (2,2) \to (0,2)$.