Number of Moves

Given a chess board of n rows (top to bottom) and n columns (left to right).
In each move, a knight moves either:

- *2* column positions and 1 row position
- 2 row positions and 1 column position

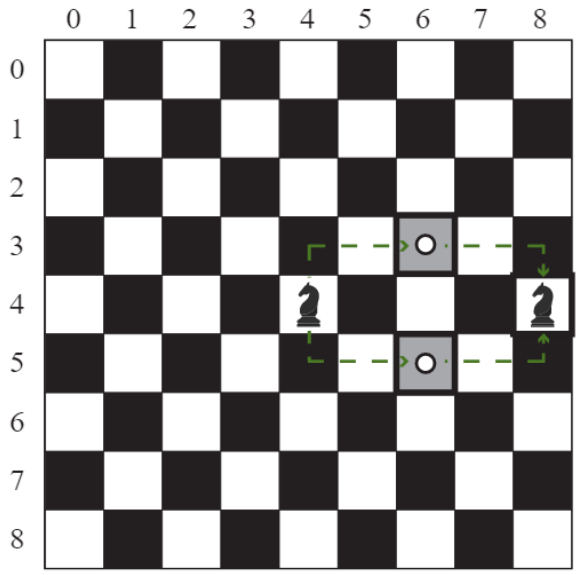
In other words, a move is 2 steps along one axis and *1* step along a perpendicular axis.

Given a starting position A and ending position B, calculate the minimum number of moves needed by the knight to move from A to B if it is possible. If it is not possible, return -1.

Example
n = 9
startRow = 4
startCol = 4
endRow = 4
endCol = 8

The chess board has a size of *9 x 9.*

- Starts at the position *(startRow, startCol) = (4, 4).*
- Move 1 step up or down, then 2 steps right to reach either the position (3, 6) or (5,6).
- Move 2 steps right and 1 step down or up as necessary to reach the position (4,8).
- The minimum number of moves to move from the position (4, 4) to the position (4, 8) is *2.*



Function Description

Complete the function *minMoves* in the editor below.

minMoves has the following parameters:

int n: the width and height of the square board

int startRow: the row of the starting location

int startCol: the column of the starting location

int endRow: the row of the target location

int endCol: the column of the target location

Returns:

int: a single integer that denotes the number of moves required or -1 if it is not possible to reach the target location.

Constraints

- *4 ≤ n ≤ 150*
- *0 ≤ startRow, startCol, endRow, endCol < n*

Input Format For Custom Testing

The first line of input contains an integer *n*.

The next *4* lines contain the integer values *startRow, startCol, endRow,* and *endCol.*

Sample Case 0

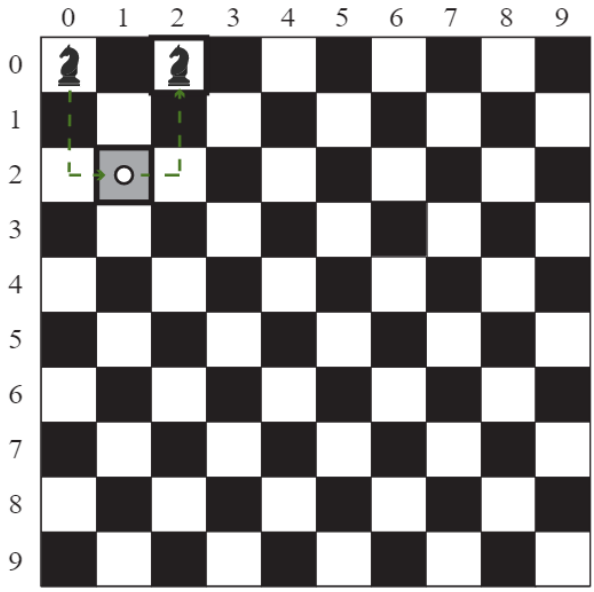
Sample Input For Custom Testing

```
STDIN   Function
-----   --------
10  →   n = 10
0   →   startRow = 0
0   →   startCol = 0
0   →   endRow = 0
2   →   endCol = 2
```

Sample Output

```
2
```

Explanation



The chessboard is of size *10 x 10.*

- Start at the position (0, 0).
- Move 2 steps down and 1 step right to reach the position (2, 1).
- Move 1 step right and 2 steps up to reach the position (0, 2).
- The minimum number of moves to move from the position (0, 0) to the position (0, 2) is *2.*

Sample Case 1

Sample Input For Custom Testing

```
STDIN   Function
-----   --------
6   →   n = 6
5   →   startRow = 5
1   →   startCol = 1
```

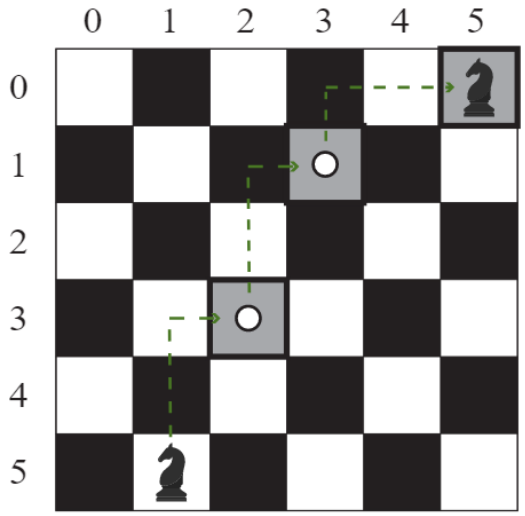
```
0 → endRow = 0
5 → endCol = 5
```

Sample Output

```
3
```

Explanation

The chessboard is of size *6 x 6.*



- Start at the position (5, 1).
- Move 2 steps up and 1 right to position (3, 2).
- Move 2 steps up and 1 right to position (1, 3).
- Move 1 step up and 2 steps right to reach the position (0, 5).
- The minimum number of moves to move from the position (5, 1) to the position (0, 5) is *3.*