

773. Sliding Puzzle

Description

On an `2 x 3` board, there are five tiles labeled from `1` to `5`, and an empty square represented by `0`. A **move** consists of choosing `0` and a 4-directionally adjacent number and swapping it.

The state of the board is solved if and only if the board is `[[1,2,3],[4,5,0]]`.

Given the puzzle board `board`, return *the least number of moves required so that the state of the board is solved*. If it is impossible for the state of the board to be solved, return `-1`.

Example 1:

1	2	3
4		5

Input: `board = [[1,2,3],[4,0,5]]`
Output: `1`
Explanation: Swap the `0` and the `5` in one move.

Example 2:

1	2	3
5	4	

Input: `board = [[1,2,3],[5,4,0]]`
Output: `-1`
Explanation: No number of moves will make the board solved.

Example 3:

4	1	2
5		3

Input: `board = [[4,1,2],[5,0,3]]`
Output: `5`
Explanation: 5 is the smallest number of moves that solves the board.
An example path:
After move 0: `[[4,1,2],[5,0,3]]`
After move 1: `[[4,1,2],[0,5,3]]`
After move 2: `[[0,1,2],[4,5,3]]`
After move 3: `[[1,0,2],[4,5,3]]`
After move 4: `[[1,2,0],[4,5,3]]`
After move 5: `[[1,2,3],[4,5,0]]`

Constraints:

- `board.length == 2`
- `board[i].length == 3`
- `0 <= board[i][j] <= 5`
- Each value `board[i][j]` is **unique**.

