You are given an n x n binary matrix grid where 1 represents land and 0 represents water.

An **island** is a 4-directionally connected group of 1's not connected to any other 1's. There are **exactly two islands** in grid.

You may change 0's to 1's to connect the two islands to form **one island**.

Return *the smallest number of* 0*'s you must flip to connect the two islands*.

**Example 1:**

Input: grid = [[0,1],[1,0]]  
Output: 1

**Example 2:**

Input: grid = [[0,1,0],[0,0,0],[0,0,1]]  
Output: 2

**Example 3:**

Input: grid = [[1,1,1,1,1],[1,0,0,0,1],[1,0,1,0,1],[1,0,0,0,1],[1,1,1,1,1]]  
Output: 1

**Constraints:**

* n == grid.length == grid[i].length
* 2 <= n <= 100
* grid[i][j] is either 0 or 1.
* There are exactly two islands in grid.