

Problem E. Electricity and Magic

Input file: *standard input*
Output file: *standard output*
Time limit: 14 seconds
Memory limit: 256 mebibytes

The Wizard of Yendor has a board of n rows and m columns. There is a electric light in each cell.

He can flip some lights: if this light is on, turn it off, else turn it on.

He can choose a $cell(i, j)$, and he has following two operations:

1. Flip the light on the cells which share a common edge with $cell(i, j)$.
2. Flip the light on the cells which share a common edge with $cell(i, j)$ and in $cell(i, j)$ itself.

You are given the initial state of board. Output the minimum number of operations to turn off the all the lights.

Input

There are multiple test cases, terminated by a line "0 0".

For each test case, the first line contains two integers n, m ($1 \leq n, m \leq 10$).

In following n lines, each line contains a string consisting of m characters, representing the initial state (0 means off, 1 means on).

Total size of the input file does not exceed 20 kibibytes.

Output

For each case, print in the separate line the minimum number operations.

Example

standard input	standard output
3 3	3
111	2
111	
111	
3 3	
000	
010	
000	
0 0	