H - Street under Malibag-Mogbazar Flyover

Do you think this problem needs further explanation? We think it doesn't.
The people are tired of complaining about this situation. Now they have taken an initiative to fix it themselves temporarily. They decided to fill the holes with bricks-sand-cement combination. And we are here to help them.

First we need to identify the places to work with. We will think of a street as a 2D grid. Then mark the cells representing holes with '.' and others as '#'. Then we will try to find the number of connected regions containing holes only. Two cells are connected if they share a side horizontally or vertically. For example, in the following 5x6 grid, there are three such connected regions.

…###
…###
.###..
###...
..###.
…###

Input

There will be T(<=50) test cases.
First line of each case contains two integers M, N denoting the number of rows and columns in the grid. (1 <= M,N <= 100)
Then, there will be M lines each containing exactly N characters either '.' or '#' without quotes.

Output

For each case, print the case number and a single integer showing total number of connected regions.

Sample Input	Sample Output
2 5 6 …### …### .###.. ###... ..###. …### 3 3 ..# … #..	Case 1: 3 Case 2: 1