11699 Rooks

You have unexpectedly become the owner of a large chessboard, having fifteen squares to each side. Because you do not know how to play chess on such a large board, you find an alternative way to make use of it.

In chess, a rook attacks all squares that are in the same row or column of the chessboard as it is. For the purposes of this problem, we define a rook as also attacking the square on which it is already standing.

Given a set of chessboard squares, how many rooks are needed to attack all of them?

Input

Input consists of a number of test cases. Each test case consists of fifteen lines each containing fifteen characters depicting the chess board. Each character is either a period (.) or a hash (#). Every chessboard square depicted by a hash must be attacked by a rook. After all the test cases, one more line of input appears. This line contains the word 'END'.



Output

Output consists of exactly one line for each test case. The line contains a single integer, the minimum number of rooks that must be placed on the chess board so that every square marked with a hash is attacked.

Sample Input