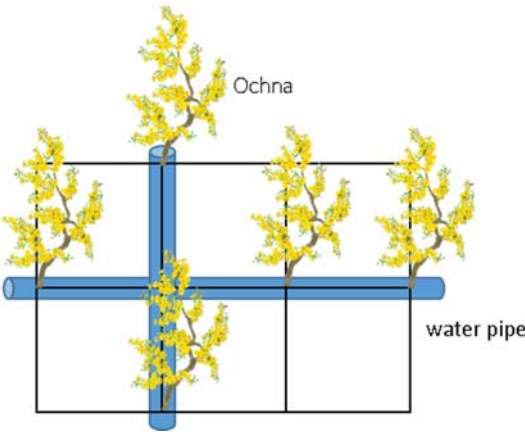# Problem G. Water Pipe

Bach has an Ochna farm, which is represented by a rectangle of $n \times m$ ($1 \leq n, m \leq 100$) grid. The grid contains either Ochna tree ('#') or not ('.'), which are located at the lattice points of the grid. In this summer, the weather is very hot and his trees need more water. He decided to set the water pipes to help his trees. Each pipe is set in a row or a column of the farm. The tree will be helped if the pipe lay on it. Find the minimum number of pipes to help all Ochna trees.

Input

The first line of input contains 2 integers n and m.

Next, there are n lines, each line contains m characters representing one row of grid. Each character is either '#' or '.'. The characters do not have spaces between them.

Output

The output should contain a single integer – the minimum number of pipes needed.

Examples

Standard Input	Standard Output
3 4 .#.. #.## .#..	2