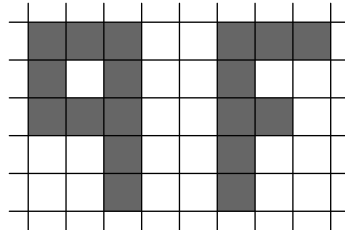


Letters Q and F

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 512 megabytes

Little Lev is learning how to draw letters **Q** and **F**. Initially, he has a white grid of size $n \times m$. Then he will draw several letters of one of the following two shapes:



Lev will not rotate or mirror these two shapes. Every time he draws a new letter, he will choose a position for the letter inside the grid and paint all cells of the shape black. Lev will only draw letters in such a way that before drawing all black cells of the letter are white — that is, he will never paint a cell twice.

You are given the final coloring of the grid. Count the number of letters **Q** and letters **F** drawn by Lev.

Input

The first line contains two integers n and m — the height and the width of the grid ($5 \leq n \leq 300$; $3 \leq m \leq 300$).

The next n lines contain m characters each, denoting the final state of the grid. A white cell is denoted by '.', a black cell is denoted by '#'.

It is guaranteed that the grid is a valid result of Lev's drawing.

Output

Print two integers — the number of letters **Q** and the number of letters **F** drawn by Lev, respectively.

Examples

standard input	standard output
<pre> 5 3 ### #.# ### ..# ..# </pre>	<pre> 1 0 </pre>
<pre> 5 3 ### #.. ##. #.. #.. </pre>	<pre> 0 1 </pre>
<pre> 5 8 ###..### #.#..#.. ###..##. ..#..#.. ..#..#.. </pre>	<pre> 1 1 </pre>
<pre> 8 8### ###..#.# #.##### ###.#### #.###.## #.#.###. ..#...#.# </pre>	<pre> 2 2 </pre>

Note

Illustration for the fourth example test:

