Problem H

	MEMORY LIMIT		CPU TIME LIMIT		DIFFICULTY
	1024 MB		**6 seconds**	**?**	**Not Available**

LINKS

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⬇ Sample data files

disconnected) maze.

```
/\
\/
```

This maze has only a single region fully enclosed. Removing any wall connects it to the outside.

```
/\..
\.\.
.\/\
..\/
```

This maze has two enclosed areas. Two walls need to be removed to connect all regions to the outside.

Input

The first line has two numbers, R and C, giving the number of rows and columns in the maze's input description. Following this are R lines each with C characters, consisting only of the characters '/', '\', and '.'. Both R and C are in the range $1 \ldots 1\,000$.
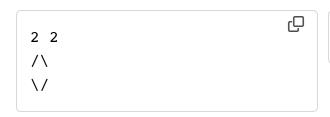
Define an odd (even) square as one where the sum of the x and y coordinates is odd (even). Either all forward slashes are in the odd squares and all backslashes in the even squares, or vice versa.

Output

Output on a single line an integer indicating how many walls need to be removed so escape is possible from every region in the maze.
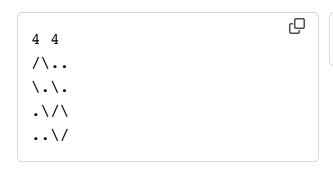
Sample Input 1

```
2 2
/\
\/
```
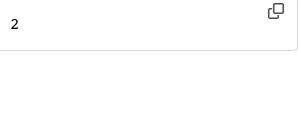
Sample Output 1

```
1
```

Sample Input 2

```
4 4
/\..
\.\.
.\/\
..\/
```

Sample Output 2

```
2
```

Sample Input 3

```
2 2
\/
/\
```

Sample Output 3

```
0
```

Sample Input 4

```
8 20
/\/\/\/\/\/\/\/\/\/\
\../\.\/././/./\/\/\/
/./\../.\/\\.\/\/\/\
\/\/\.\/\/./\/..\../
/\/./\/\/./..\/\/..\
\.\../././\.\/\/./\.\/
/.../\../..\/./.../\
\/\/\/\/\/\/\/\/\/\/
```

Sample Output 4

```
26
```