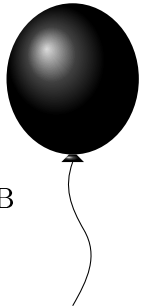# I Ali Qapu Palace Yard

TIME LIMIT: 2.0s
MEMORY LIMIT: 1024MB

There is a rectangular yard in Ali Qapu Palace, having been covered with a blanket of fresh snow in the morning (top in the figure below).

Rabbits and foxes living near the Ali Qapu Palace cross the yard and leave their tracks in the snow. They always enter in the upper left corner and leave the yard from the lower right corner. In between, they can move back and forth, playing in the snow, and even crossing their own tracks. At any time, there is at most one animal in the yard. No animal enters the yard more than once. The movements of the animals can be described by dividing the yard into quadratic cells. The animals never move diagonally in a single step and never jump over a cell. When an animal enters a cell, its tracks will cover all previous tracks left in this cell.

For example, first, a rabbit crossed the yard from top-left to bottom-right (middle in the figure). After that, a fox crossed, and now its tracks partially covered the rabbit's (bottom in the figure).

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........
........
........
........
........

RRR.....
..RR....
..R....R
..RRRR.R
.....RRR

FFR.....
.FRR....
.FFFFF.R
..RRFFR
.....FFF
```

You are given a map of the yard at some time after indicating for each cell if there are any visible tracks and whether they were left by a rabbit or by a fox (bottom in the figure).

You are interested in the local wildlife population. Write a program to determine the minimal possible number n of animals that must have crossed the yard to leave the given pattern of tracks in the snow.

INPUT

The first line contains two integers h and w ($1 \leq h, w \leq 4 \times 10^3$) — the height and the width of the yard map.

h lines follow with exactly w characters on each: the map, where '.' marks untouched snow, 'R' a spot where a rabbit's track is the topmost one, and 'F' a spot where a fox's track is the topmost one. There is at least one track in the yard.

OUTPUT

Print the minimal number $1 \leq n$ of animals that could have left the tracks given in the input.

SAMPLES

Sample input 1	Sample output 1
5 8 FFRR.... .F.RRRRR .FF....R ..FFFFFR .....RFF	2