

COCI 2009/2010**Task KRALJEVI****7th round, 24. April 2010.**

1 second / 64 MB / 120 points

Mirko and Slavko are playing a chess like game. The game is played on a non-standard chess board sized **R** rows by **C** columns. Each player starts with some number of chess kings. In chess kings can move from their current field to any of the 8 neighbouring fields.

Player spread is defined as the complete **sum of distances between all pairs** of pieces of the given player. The distance between two pieces is the smallest number of moves required for both pieces to reach the same field. No actual moves are performed when calculating the distance and as such enemy pieces do not influence the result.

Mirko knows that the spread is a vital piece of strategic information and would like you to make him a program that will calculate both his and Slavko's spread.

INPUT

The first line of input contains two integers **R** and **C** ($1 \leq R, C \leq 1\ 000$), number of rows and columns.

Next **R** lines contain **C** characters each. Character '**M**' denotes Mirko's piece, '**S**' Slavko's piece and '.' denotes an empty field.

There is at least one piece per player on the board. Otherwise the game would be over.

OUTPUT

In the first and only line of output you need to print exactly two integers. The first integers is the spread of Mirko's and the second Slavko's pieces.

SCORING

In test cases worth **20%** of total points the number of pieces on the board will be less than or equal to 5000.

In test cases worth **60%** of total points, the numbers **R** and **C** will be smaller than or equal to 300.

SAMPLE TEST CASES

Input: 2 3 SMS MMS	Input: 2 3 S.M M..	Input: 4 5 M.... ..S.M SS..S .M...
Output: 3 5	Output: 2 0	Output: 10 13