B. Right Triangles

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given a $n \times m$ field consisting only of periods (`'.'`) and asterisks (`'*'`). Your task is to count all right triangles with two sides parallel to the square sides, whose vertices are in the centers of `'*'`-cells. A right triangle is a triangle in which one angle is a right angle (that is, a 90 degree angle).

Input

The first line contains two positive integer numbers n and m ($1 \le n, m \le 1000$). The following n lines consist of m characters each, describing the field. Only `'.'` and `'*'` are allowed.

Output

Output a single number — total number of square triangles in the field. Please, do not use `%lld` specificator to read or write 64-bit integers in C++. It is preffered to use `cout` (also you may use `%I64d`).

Examples

input
2 2 ** *.
output
1

input
3 4 *..* .**. *.**
output
9