

# Counting K-Rectangle

[English](#)

[Vietnamese](#)

Given a  $M \times N$  square board. Each square contains a letter of the English alphabet ('A' .. 'Z').

A K-rectangle of the board is a rectangle whose sides are parallel to the sides of the board, and contains exactly K different types of letter.

For example, with this  $4 \times 3$  board:

```
CED
CEB
CBC
DDA
```

The rectangle  $[(1,1), (2, 2)]$  is a 2-rectangle of the board because it contains 2 different letters: C and E.

Given M, N, K and the  $M \times N$  board. Determine how many K-rectangles there are in the board.

## Input

The first line contains 3 integers M, N and K. ( $1 \leq M, N \leq 100, 1 \leq K \leq 26$ )

The following M lines, each contains N letters of the English alphabet ('A' .. 'Z')

## Output

Write one integer - the number of K-rectangles in the given board.

## Example

**Input:**

```
4 3 3
CED
CEB
CBC
DDA
```

**Output:**

```
12
```