



## Problem A. Triples

You are given a grid size  $m \times n$ , the horizontal lines of the grid are numbered from 1 to  $m$ , from top to bottom, the vertical lines of the grid are numbered from 1 to  $n$ , from left to right. The point is located on the intersection of line  $i$  and column  $j$  of grid called point  $(i, j)$ . Each point can be colored blue, red or not colored. We call triple sets  $(C_1, C_2, C_3)$  a nice set if three point  $C_1, C_2, C_3$  satisfy the following conditions:

- 1)  $C_1, C_2$  in the same row, and  $C_2, C_3$  in the same column;
- 2)  $C_1, C_3$  the same color and different color with  $C_2$ .
- 3)  $C_1, C_2, C_3$  should be colored.

**Request:** Your task is to count the number of triple sets.

## Input

The first line contains the integer  $T \leq 10$  that is the number of data sets. The following  $T$  lines, each of the following forms:

- The first line contains two integers  $m, n \leq 1000$ ;
- Each of next  $m$  lines contains a string of length  $n$ . The character  $j$  on line  $i$  is 0, 1 or 2, respectively, is not colored, colored in blue or colored in red.

## Output

There are  $T$  lines, each line is an integer which is the number of nice sets that correspond to the input set.

## Examples

Standard Input	Standard Output
1 3 3 000 201 002	1