F. Present to Mom

time limit per test: 5 seconds memory limit per test: 256 megabytes

input: standard input output: standard output

How many stars are there in the sky? A young programmer Polycarpus can't get this question out of his head! He took a photo of the starry sky using his digital camera and now he analyzes the resulting monochrome digital picture. The picture is represented by a rectangular matrix consisting of n lines each containing m characters. A character equals '1', if the corresponding photo pixel is white and '0', if it is black.

Polycarpus thinks that he has found a star on the photo if he finds a white pixel surrounded by four sideneighboring pixels that are also white:

> 1 111

> > 1

a star on the photo

Polycarpus whats to cut out a rectangular area from the photo and give his mom as a present. This area should contain no less than k stars. The stars can intersect, have shared white pixels on the photo. The boy will cut out the rectangular area so that its borders will be parallel to the sides of the photo and the cuts will go straight between the pixel borders.

Now Polycarpus keeps wondering how many ways there are to cut an area out of the photo so that it met the conditions given above. Help Polycarpus find this number.

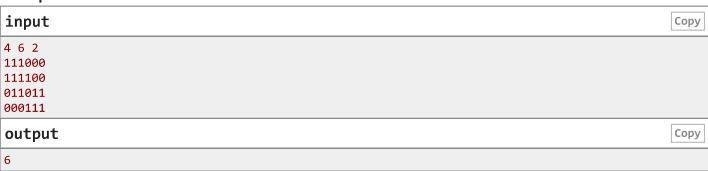
Input

The first line of the input data contains three integers n, m and k ($1 \le n$, $m \le 500$; $1 \le k \le nm$). Then follow n lines, containing the description of the given photo as a sequence of lines. Each line contains m characters '0' or '1'.

Output

Print the required number of areas on the given photo.

Examples



input
5 5 4
11111

11111	
11111 11111 11111 11111	
11111	
11111	
output	Сору
9	

Note

We'll number the rows and columns below starting from 1, the coordinates (p,q) will denote a cell in row p, column q.

In the first sample Polycarpus should cut out any area containing a rectangle whose opposite corners lie in cells (1,1) and (3,4). Only rectangles with opposite corners in (1,1) and (x,y), where $x \ge 3$ and $y \ge 4$ fit the conditions.

In the second sample any rectangle whose each side is no less than four, will do. The possible rectangle sizes are 4×4 , 4×5 , 5×4 and 5×5 . Such figures can be cut in 4 ways, 2 ways, 2 ways and 1 way correspondingly.

Please do not use the %Ild specificator to read or write 64-bit integers in C++. It is preferred to use cin, cout streams or the %I64d specificator.