

Mirko is a strange boy so he has written down a square matrix full of ones and zeroes. Now he is interested in how many plusses there are in his matrix.

A plus is a square such that its side has an odd length greater than 1 and all of its cells are zero, except for the middle row and the middle column: they must be full of ones. For example, in the matrix below there are two plusses, one inside the other:

```
00100
00100
11111
00100
00100
```

How many plusses are there in Mirko's matrix?

INPUT

In the first line there is an integer N ($3 \leq N \leq 2000$), dimension of the square matrix.

Next N lines represents rows of the matrix.

OUTPUT

In one and only line of output print the number of plusses appearing in the matrix.

EXAMPLE TEST DATA

input	input
5	8
00100	00010000
00100	00010000
11111	00010000
00100	11111111
00100	00010000
	00010010
	00010111
	00010010
output	output
2	3

In a far away country there is a wide river, N villages on the left and N villages on the right side of this river (denoted by $1..N$ on each side). There are also M small ships, each of them connecting one village from the left and one village from the right side (in both ways).

You are to organize a film festival in four of these villages: **two from the left and two from the right** side. Each two of these four villages must be connected by a ship (directly) if they belong to opposite sides of the river.

Help yourself to choose these four villages and first find out; in **how many ways can you choose them?**

INPUT

First line of input contains two positive integers N ($2 \leq N \leq 1000$), number of villages on every side of river, and M ($4 \leq M \leq N^2$), number of small ships.

Next M lines contain two integers, both from interval $[1, N]$, representing the village from the left and the village from the right side connected by this ship.

OUTPUT

In one and only line of output print the required number of ways to choose villages for the festival.

SCORING

In test cases worth a total of 67% points, $N \leq 300$ will hold.

In test cases worth a total of 33% points, $300 \leq N \leq 1000$ will hold.

EXAMPLE TEST DATA

input	input
3 4	3 7
1 2	1 1
1 3	1 3
2 2	2 1
2 3	2 3
	3 1
	3 2
	3 3
output	output
1	3