

## 4401 Counting square

There is a matrix of size  $R$  rows by  $C$  columns. Each element in the matrix is either '0' or '1'. A square is called magic square if it meets the following three conditions.

- (1) The elements on the four borders are all '1'.
- (2) Inside the square (excluding the elements on the borders), the number of '1's and the number of '0's are different at most by 1.
- (3) The size of the square is at least 2 by 2. Now given the matrix, please tell me how many magic square are there in the matrix.

### Input

The input begins with a line containing an integer  $T$ , the number of test cases.

Each case begins with two integers  $R, C$  ( $1 \leq R, C \leq 300$ ), representing the size of the matrix. Then  $R$  lines follow. Each contains  $C$  integers, either '0' or '1'. The integers are separated by a single space.

### Output

For each case, output the number of magic square in a single line.

### Sample Input

```
3
4 4
1 1 1 1
1 0 1 1
1 1 0 1
1 1 1 1
5 5
1 0 1 1 1
1 0 1 0 1
1 1 0 1 1
1 0 0 1 1
1 1 1 1 1
2 2
1 1
1 1
```

### Sample Output

```
3
2
1
```