**Image Recognition**

**Time Limit: 10000/5000 MS (Java/Others)    Memory Limit: 65536/32768 K (Java/Others)**

**Problem Description**

Now there is an image recognition problem for you. Now you are given an image which is a N \* N matrix and there are only 0s and 1s in the matrix. And we are interested in the squares in whose four edges there is no 0s. So it’s your task to find how many such squares in the image.

**Input**

The first line of the input contains an integer T (1<=T<=10) which means the number of test cases.

For each test cases, the first line is one integer N (1<=N<=1000) which is the size of the image. Then there are N lines and each line has N integers each of which is either 0 or 1.

**Output**

For each test case, please output a line which is "Case X: Y ", X means the number of the test case and Y means the number of the squares we are interested in in the image.

**Sample Input**

1

3

1 1 0

1 1 0

0 0 0

**Sample Output**

Case 1: 5