

# Practice



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## X Total Shapes

Submissions: 7607 (/problem\_submissions.php?pid=1233) Accuracy: 54.27% Difficulty: [Medium \(https://practice.geeksforgeeks.org/Medium/0/0/\)](https://practice.geeksforgeeks.org/Medium/0/0/) Marks: 4Associated Course(s): [Geeks Classes in Noida \(/courses/geeks-classes/\)](/courses/geeks-classes/) [Geeks Classes in Noida \(/courses/geeks-classes-in-noida/\)](/courses/geeks-classes-in-noida/)[\(/topics/Graph/\)](/topics/Graph/)[Show Topic Tags](#)[Google \(/company/Google/\)](/company/Google/)[Amazon \(/company/Amazon/\)](/company/Amazon/)

Given N \* M string array of O's and X's

Return the number of 'X' total shapes. 'X' shape consists of one or more adjacent X's (diagonals not included).

Example (1):

```
000X000
0XXXXX0
0X000X0
```

answer is 1 , shapes are :

```
(i)      X
        X X X X
        X      X
```

Example (2):

```
XXX
000
XXX
```

answer is 2, shapes are

(i) XXX

(ii) XXX

**Input:**

The first line of input takes the number of test cases, T.

Then T test cases follow. Each of the T test cases takes 2 input lines.

The first line of each test case have two integers N and M. The second line of N space separated strings follow which indicate the elements in the array.

**Output:**

Print number of shapes.

**Constraints:**

$1 \leq T \leq 100$

$1 \leq N, M \leq 50$

Example:

Input:

2

4 7

OOOXXO OXOXOOX XXXXOXO OXXXOOO

10 3

XXO OOX OXO OOO XOX XOX OXO XXO XXX OOO

Output:

4

6

**\*\* For More Input/Output Examples Use 'Expected Output' option \*\***

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```

21     for (int p=0; p<c; p++){
22         cin>>r;
23         cin>>c;
24         regions=0;
25         char **a = new char*[r], dummy;
26         for (int i=0; i<r; i++){
27             a[i] = new char[c];
28             for (int j=0; j<c; j++){
29                 cin>>a[i][j];
30             }
31         }
32
33         for (int i=0; i<r; i++){
34             for (int j=0; j<c; j++){
35                 if (a[i][j] == 'X') {
36                     regions++;
37                     visitX(a, i, j, r, c);
38                 }
39             }
40         }
41
42         cout<<regions<<endl;
43     }
44 }
45 return 0;


```

☐ Test against custom input

Expected Outcome

Compile &amp; Test

Submit

Correct Answer. 

Execution Time:0.01

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