Assignment Case	
COMP6047 Algorithm and Programming	
Computer Science	**<Case Code>**
***Valid on** Compact Semester Year 2019/2020*	**Revision 00**

Soal
Case

Count the Star

Lili is going to have a birthday party tomorrow and she invited Jojo to her party. Jojo hasn't prepared any gift yet. But he knows that Lili likes anything related about star and thus, he came up with an idea. He wants to make a simple program to count how many stars there are according to the sign given in a 2d array. There are 3 signs, such as '>', '<', and 'x'.

Assuming d is a positive integer and the sign is located at cell (y, x), then:

- If the sign is '>', check all cells in (y-d, x-d) and (y+d, x-d) direction
- If the sign is '<', check all cells in (y-d, x+d) and (y+d, x+d) direction
- If the sign is 'x', check all cells in (y-d, x-d), (y+d, x-d), (y-d, x+d) and (y+d, x+d) direction

Format Input

The input starts with an integer T, the number of test cases. Each test case starts with integers R and C, the number of rows and column. Then, it will be followed with the array containing '.', '*', and the signs. It is guaranteed that each test case will only have maximum of one sign.

Format Output

For each test case, print "Case #T:", and followed by how many stars are found.

Constraints

$1 \leq T \leq 10$

$1 \leq R, C \leq 50$

Sample Input	Sample Output
3 6 6 ..*... .*.... ....>. ...*.. ..*... .*.... 4 5 *.... ...*. ..<.. *..*. 4 5 ....* *..*. ..x*. .*.*.	Case #1: 4 Case #2: 2 Case #3: 4

Note:
Don't forget to add the newline character after printing the output.