Tic-tac-toe

Everyone knows about the famous game of Tic-Tac-Toe. I am very fond of this game.

Actually, I consider it as the world's best game. But my friend Harshit thinks that I am no good at this game. When I tried to convince him, but he simply laughed at me and made fun of me. After hours of argument, he finally game me challenge to solve. I am busy at the moment so I need your help. Please solve the challenge for me. I need to prove myself before Harshit, so don't let me down. The challenge is as follows:

You will be simply given the picture of a Tic-Tac-Toe Game. By just looking at that picture, you have to tell its game-status. The list of possible game-status is:

O - 'O' has won.

X - 'X' has won.

C - The match is still under progress.

I - The given scenario is impossible to occur, if all the rules are followed.

D - The match has been drawn.

Note: Do not predict the result. Just tell the status of immediate scenario.

Input

First line of input contains a number N. Then there is a blank line. Then N test cases follows.

For each test case, you will be given the picture of game. The pictures will be of three line.(Each line having 3 characters without any spaces)

'.' represents blank box.

'O' represents box marked with 'O'. ('O' not zero, It is alphabet)

'X' represents box marked with 'X'

There is a blank line after every test case.

Output

Answer to every test case is a single character indicating the game-status of given scenario.

You have to print a single string containing answers of all the test cases.

Example

Input:

7

OX.
OX.
OX.

OXX
.OX
..O

X.O
.X.
..X

X.O
.X.
O.X

XOO
OOX
XXO

XO.
OOX
XXO

OXX
OXX
OOO

Output:

IOIXDCO