



Practice Mode

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Qualification Round 2013

**A. Tic-Tac-Toe-Tomek**[B. Lawnmower](#)[C. Fair and Square](#)[D. Treasure](#)[Contest Analysis](#)[Questions asked](#)

Submissions	
Tic-Tac-Toe-Tomek	
10pt	Not attempted <b>19860/21861 users</b> correct (91%)
20pt	Not attempted <b>16122/19755 users</b> correct (82%)
Lawnmower	
10pt	Not attempted <b>12579/14509 users</b> correct (87%)
30pt	Not attempted <b>10569/12136 users</b> correct (87%)
Fair and Square	
10pt	Not attempted <b>17569/18199 users</b> correct (97%)
35pt	Not attempted <b>6080/15270 users</b> correct (40%)
55pt	Not attempted <b>872/3725 users</b> correct (23%)
Treasure	
20pt	Not attempted <b>1359/4458 users</b> correct (30%)
60pt	Not attempted <b>141/547 users</b> correct (26%)

**Problem A. Tic-Tac-Toe-Tomek**

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the [Quick-Start Guide](#) to get started.

Small input  
10 points

Solve A-small

Large input  
20 points

Solve A-large

**Problem**

Tic-Tac-Toe-Tomek is a game played on a 4 x 4 square board. The board starts empty, except that a single 'T' symbol may appear in one of the 16 squares. There are two players: X and O. They take turns to make moves, with X starting. In each move a player puts her symbol in one of the empty squares. Player X's symbol is 'X', and player O's symbol is 'O'.

After a player's move, if there is a row, column or a diagonal containing 4 of that player's symbols, or containing 3 of her symbols and the 'T' symbol, she wins and the game ends. Otherwise the game continues with the other player's move. If all of the fields are filled with symbols and nobody won, the game ends in a draw. See the sample input for examples of various winning positions.

Given a 4 x 4 board description containing 'X', 'O', 'T' and '.' characters (where '.' represents an empty square), describing the current state of a game, determine the status of the Tic-Tac-Toe-Tomek game going on. The statuses to choose from are:

- "X won" (the game is over, and X won)
- "O won" (the game is over, and O won)
- "Draw" (the game is over, and it ended in a draw)
- "Game has not completed" (the game is not over yet)

If there are empty cells, and the game is not over, you should output "Game has not completed", even if the outcome of the game is inevitable.

## - Top Scores

netkuba	250
pieguy	250
tanakh	250
cgy4ever	250
STEP4	250
Xhark	250
Balajiganapathi	250
Sohel	250
krijgertje	250
LoRdTaPaKaH	250

## Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each test case consists of 4 lines with 4 characters each, with each character being 'X', 'O', '.' or 'T' (quotes for clarity only). Each test case is followed by an empty line.

## Output

For each test case, output one line containing "Case #x: y", where x is the case number (starting from 1) and y is one of the statuses given above. Make sure to get the statuses exactly right. When you run your code on the sample input, it should create the sample output exactly, including the "Case #1: ", the capital letter "O" rather than the number "0", and so on.

## Limits

The game board provided will represent a valid state that was reached through play of the game Tic-Tac-Toe-Tomek as described above.

## Small dataset

$$1 \leq T \leq 10.$$

## Large dataset

$$1 \leq T \leq 1000.$$

## Sample

Input	Output
6	Case #1: X won
XXXT	Case #2: Draw
....	Case #3: Game has not
00..	completed
....	Case #4: O won
	Case #5: O won
X0XT	Case #6: O won
XX00	
0X0X	
XX00	
X0X.	
0X..	
....	
....	

```
00XX
0XXX
0X.T
0..0
```

```
XXX0
..0.
.0..
T...
```

```
0XXX
X0..
..0.
...0
```

#### Note

Although your browser might not render an empty line after the last test case in the sample input, in a real input file there would be one.

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