Tomorrow's Tic-Tac-Toe

Figure 1

Pieces and Board: This game is played on a rectangular *n* rows by *m* columns board . The default game has 3 rows by 4 columns with the configuration of Figure 1.

To Move: Players alternate placing their pieces (which are usually X's and O's) on the board in empty spaces.

To Win: The first player to reach 3-in-a-row (horizontally or vertically) with their pieces wins. If the board is filled and nobody has done this, the game is a tie.

Compulsory Rule Changes:
• Misére Rules: 3-in-a-row loses.
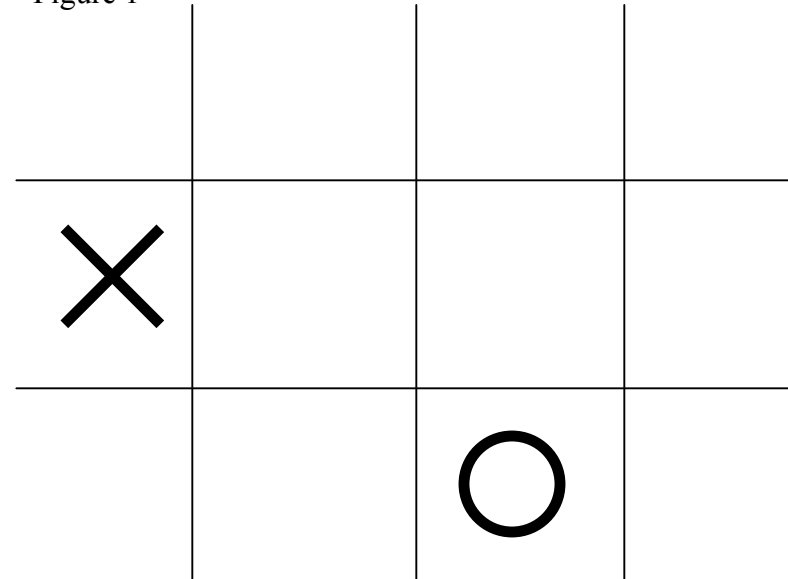• Allow for diagonal wins.

Position Representation:
• (*T row row row …*)
T stores whose turn it is (x or o), Each *row* is in the form *ppp…* where *p* is "x" or "o", representing the corresponding piece on the board, or "–" if blank. The number of *row*'s in the position indicates the number of rows. In each *row*, the number of *p*'s indicates the number of columns.

Example game:

X-player starts

0   1   2   3

4   5   6   7
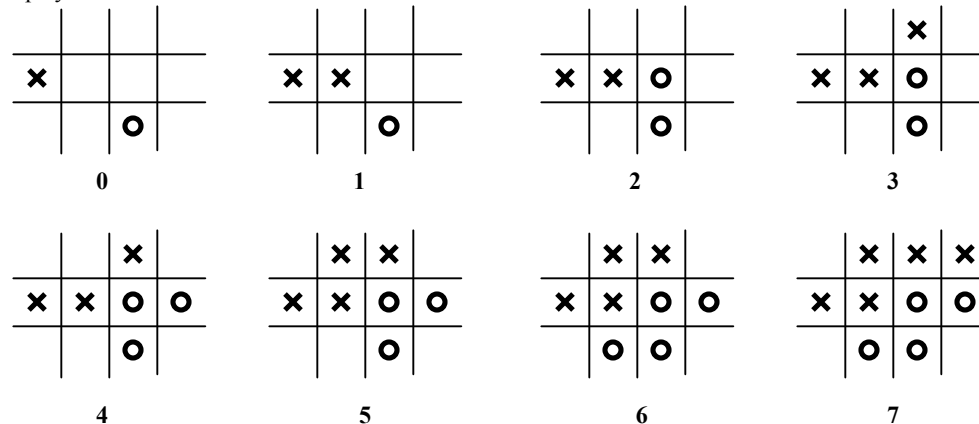
X-player wins because she has a 3-in-a-row

E.g. representations for initial position (see Figure 1):
(x ---- x--- --o-)

sample board mid-game (see board 5 in example game):
(o -xx- xxoo ---o-)