

Habits of Mind #3

Extreme Tick-Tac-Toe

Extreme Tick-Tac-Toe is a game for two players – Player One and Player Two. Each player has her own special board and is given six turns. Here is a copy of each player’s board.

Player One’s Game Board:

1						
2						
3						
4						
5						
6						

Player Two’s Game Board:

1	2	3	4	5	6

Player One begins by filling in the first row of her table with a run of X’s and O’s. That is, on the first line of her board, she writes six letters – one in each box – each letter either being an X or an O. Player Two looks at Player One’s first row and then places either one X or one O in the first box of her board. So at this point, Player One has filled in the first row of her board with six letters, and Player Two has filled in the first box of her board with one letter.

The game continues with Player One noticing what Player Two placed on her board and then writing down a run of six letters in the second horizontal row of her board, followed by Player Two writing one letter in the second box of her board. This game proceeds in this fashion, with each player’s moves visible to the other, until all boxes are filled with X’s and O’s; thus, Player One has produced six rows of six marks each, and Player Two has produced one row of six marks. Player One wins if any horizontal row she wrote down is identical to the row that Player Two created. Player Two wins if Player Two’s string is not one of the six strings made by Player One.

Would you rather be Player One or Player Two? Who has the advantage? Can you describe a strategy for either side that will always result in victory? Give a careful justification of a position that you take.

Due Date: At the beginning of class on Wednesday, September 15.