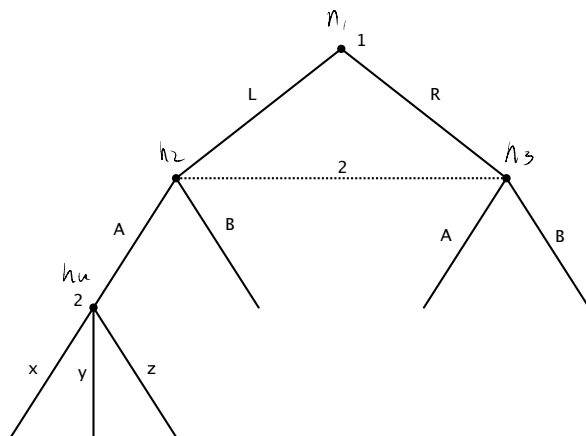


Activity: Extensive-Form Games

Econ 305

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1 Characterizing an Extensive-Form Game



- a. Is this a game of perfect or imperfect information? Why?

No, P2 has an information set of $\{n_2, n_3\}$

- b. How many information sets does each player have in the above game?

P1: one information set: $\{n_1\}$

P2: 2 information sets: $\{n_2, n_3\}, \{n_4\}$

- c. How many pure strategies does each player have in the above game?

P1: 2

P2: 6

2 Tic-Tac-Toe (Tadelis 7.3)

The extensive form representation of a game can be cumbersome even for very simple games. Consider the game of Tic-tac-toe where 2 players mark “X” or “O” in a 3×3 matrix. Player 1 moves first, then player 2, and so on. If a player gets three of his kind in a row, column, or one of the diagonals then he wins, and otherwise it is a tie. For this question assume that even after a winner is declared, the players *must completely* fill the matrix before the game ends.

- a. Is this a game of perfect or imperfect information? Why?

Perfect: every player knows their exact position in relation to every other player

- b. How many information sets does player 2 have after player 1's first move?

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- c. How many information sets does player 1 have after player 2's first move?

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