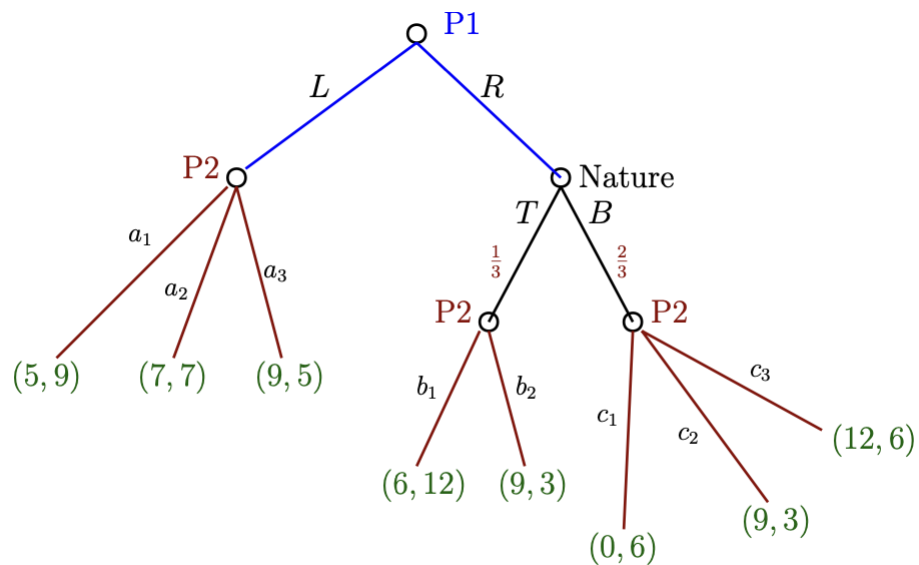


Eco 311/511: Game Theory

Problem set 3

November 4, 2023

1. “Suppose a strategy s_1 for player 1 in a 2-player game is weakly dominated by another strategy, then there is no Nash equilibrium where Player 1 plays s_1 .” True or False? Support your answer with an example.
2. Find a subgame perfect equilibrium of the game below. In this game, in the vertex where Nature moves, the probabilities (for actions T and B) are shown on the edges



3. Consider an infinitely repeated Cournot duopoly game with a linear demand function, $Q = \alpha - P$ and constant marginal cost $c > 0$. Is it

possible to sustain the monopoly outcome: each firm produces half the monopoly quantity in SPNE?

4. What is a separating equilibrium? Explain with the help of a formal example.