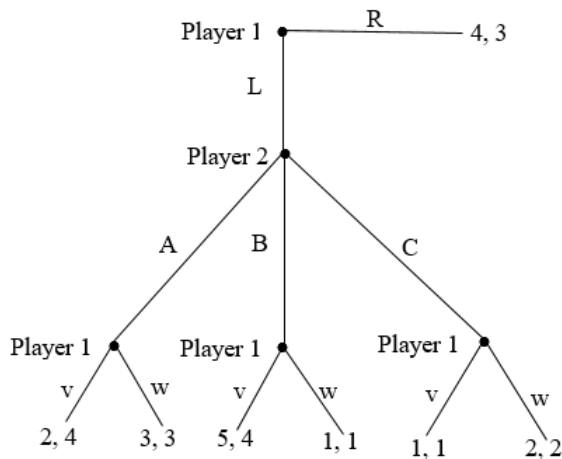


Test
Advanced Microeconomics: Part II (Uwe Jirjahn)

Summer 2024

Choose two questions out of the three questions Q1, Q2, Q3.

Q.1 Consider the following extensive-form game:



Identify the subgame-perfect Nash equilibrium.

Q.2 Consider the following normal-form game:

	Player 2	C	D	E
Player 1	A	2, x	2, 2	4, 6
	B	4, 6	0, 2	2, 0

Q.2.a Assume $x = 3$. Is there a strictly dominated strategy?

Q.2.b Assume $x = 3$. Identify the pure-strategy and mixed-strategy Nash equilibria.

Q.2.c Assume $x = 0$. Is there a strictly dominated strategy?

Q.3 Two firms ($i = 1, 2$) produce differentiated products. The demand function for the product of firm i is given by: $q_i(p_i, p_j) = 4 - p_i + \frac{1}{2}p_j$, where p_i is the price chosen by firm i and p_j the price chosen by its competitor. Firm 1 chooses its price first and firm 2 chooses its price after observing the price of firm 1. The cost function of each firm is $C_i(q_i) = 2q_i$. Find the subgame-perfect Nash equilibrium.

Note: If you answer all three questions, we will only consider Q.1 and Q.2.