

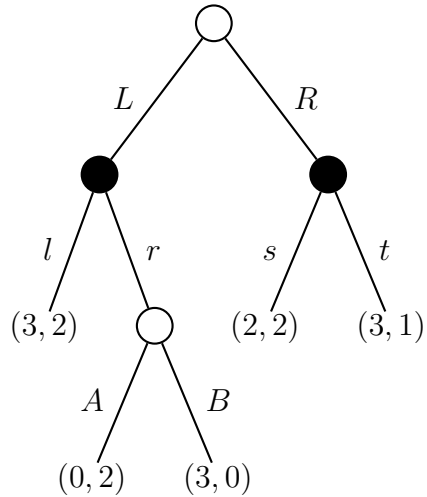
Exercise 3

Consider a pure exchange economy with two consumers and two good types. Further suppose that each consumer has the same utility function $u(x_1, x_2) := \max(x_1, x_2)$ and that the total amount of each good type in the economy is the same.

- a. (2pt.) Draw for this economy an Edgeworth box with some indifference curves.
- b. (2pt.) Show that the allocation where a consumer has all goods is strongly Pareto inefficient. Is it also weakly Pareto inefficient?
- c. (2pt.) Show that each boundary point on the box of Edgeworth corresponds with a weakly Pareto efficient allocation.
- d. (2pt.) Determine the strongly Pareto efficient allocations.
- e. (2pt.) Determine the core.

Exercise 4

Consider the following 2-player extensive form game with perfect information given by the game tree



- (1pt.) How many subgames, and which, does this game have?
- (2 pt.) How many, and which, strategies does player 1 have? How many, and which, strategies does player 2 have?
- (1 pt.) Give a completely elaborated plan of play for player 1 which is not a strategy.
- (2 pt.) Determine a normal form for this game.
- (1 pt.) Determine for each player the dominant and strictly dominant strategies.
- (1 pt.) Determine all Nash equilibria.
- (2 pt.) Determine all subgame perfect Nash equilibria.