Section Exercise 2 Solutions

1) Person A and person B run a website that produces local news stories and videos about the East Bay. In one week, A can produce 5 stories or 10 videos or any linear combination of the two, while person B can produce 7 stories or 8 videos or any linear combination of the two.

   a) Who has the absolute advantage in producing each of the two goods? Explain how you know, and what that means.

   b) Who has the comparative advantage in producing each of the two goods? Explain how you know, and what that means.

   c) Sketch the production possibility set for one week the two person team.

   d) Compared to a situation in which each person worked equally on the two tasks, how much extra could they produce if they each specialized in one task?

e) What factors or forces might the team consider in answering the following normative question: what point in the production possibility set should the team choose?

2) Let's take a look at matrix representations for four different two player, one shot, simultaneous move games. For each one, find the Nash equilibrium or equilibria in pure strategies, if any. In each case, does either player have a dominant strategy?

		Player 2 L	Player 2 R
Player 1	U	$3,3$	$0,5$
	D	$5,0$	$1,1$

Game 1

		Player 2 L	Player 2 R
Player 1	U	$1,1$	$0,5$
	D	$5,0$	$3,3$

Game 2

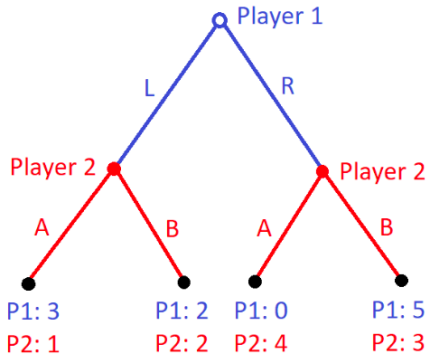
		Player 2 L	Player 2 R
Player 1	U	$1,1$	$0,0$
	D	$0,0$	$1,1$

Game 3

		Player 2 L	Player 2 R
Player 1	U	$1,-1$	$-1,1$
	D	$-1,1$	$1,-1$

Game 4

3) The following game tree illustrates the order of moves and the payoffs in a two player, sequential move game.

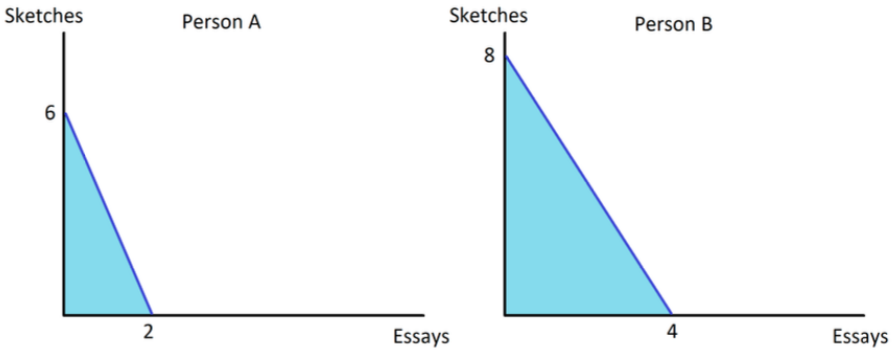


What is the unique outcome of this game that survives the process of backward induction? Explain your answer.

4) Consider the following matrix representation of a two player, one shot, simultaneous move game. Does either player have a dominant strategy? Why or why not? Find all the Nash equilibria in pure strategies, if any exist. Explain why your answers are Nash equilibria, if they exist, or why there are none, if they don't. (Please remember that if there are any Nash equilibria you should write them as what strategy each player uses, not what payoff each player gets.)

		Player 2	
		L	R
Player 1	U	$0, 2$	$6, 6$
	D	$2, 2$	$2, 0$

5) Two people, A and B, can each produce essays or sketches, or some combination of both. The following two diagrams show the production possibility set for one day for each person.



a) Let's say that A and B, as a team, need to produce a total of 5 essays, but they also want to produce as many sketches as possible. How many sketches will they produce in total? How much of each good will each person produce? Explain your answers.

b) Person C can produce up to 5 essays in one day, up to X sketches in one day, or, if they split their time, a linear combination of both. Person C has the comparative advantage over person A in the production of one of the two goods, but the comparative advantage over person B in the production of the other of the two goods. Suggest a value of X that would be consistent with this information. Explain.

Discussion prompts

1) "It's best if everyone focuses on what they're best at." Agree or disagree?