

Name: _____

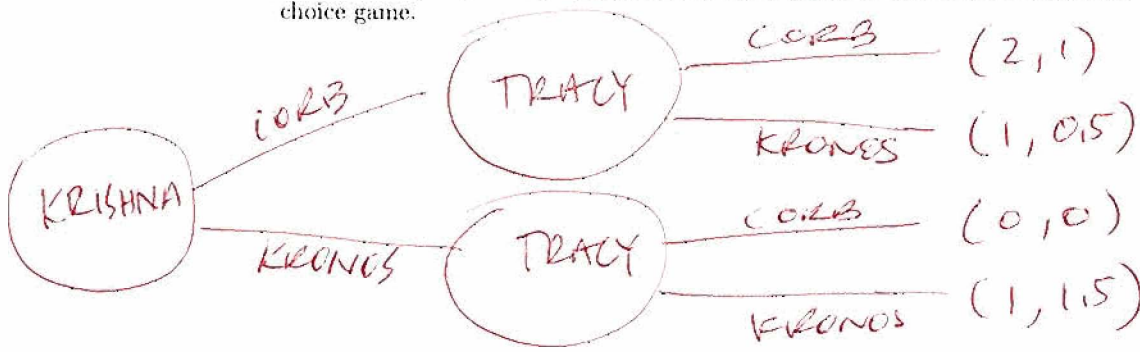
Instructions: There are two questions. Answer one of them in the space provided.

Question 1 (30 points): The following is a strategic form for Togetherness, when Tracy and Krishna made their decision simultaneously. Krishna is the row player and Tracy the column player.

| | Corb | Kronos |
|--------|------|--------|
| Corb | 2,1 | 1,.5 |
| Kronos | 0,0 | 1,1.5 |

Assume that choices are made sequentially instead of simultaneously: Krishna chooses first, then knowing Krishna's choice, Tracy makes her choice.

Part A (10 points): Construct the extensive form ~~form~~ of this sequential choice game.



Part B (20 points): Construct the strategic form of this sequential choice game. Find all the Nash equilibria, and indicate whether they are strict or not.

$X = \{C, K\}, \{C, K\}$ Krishna's strategies: $\{C, K\}$
 Tracy's: $\{C, C\}, \{C, K\}, \{K, C\}, \{K, K\}$
 TRACY

(14 pts)

| | | (C, C) | (C, K) | (K, C) | (K, K) |
|---------|---|-------------|---------------|--------|---------------|
| KRISHNA | C | <u>2, 1</u> | <u>2, 1</u> | 1, 0.5 | 1, 0.5 |
| | K | 0, 0 | 1, <u>1.5</u> | 0, 0 | <u>1, 1.5</u> |

(3 pts) Nash equilibria at $(C, (C, C)), (C, (C, K)) \} (K, (K, K))$.

(3 pts) None of them are strict.

Question 2 (30 points): Below you will find a strategic form for Grading on The Curve when players make their choices simultaneously. We assumed that that $a > c > f \geq 0$ and $x > y \geq 0$. Recall that x and y are the payoffs from activities other than studying when a player chooses to study few or many hours, respectively.

| | | |
|------|----------------|----------------|
| | many | few |
| many | $c + y, c + y$ | $a + y, f + x$ |
| few | $f + x, a + y$ | $c + x, c + x$ |

Two greedy siblings with a very old, rich uncle who craves attention and has no one else to leave his wealth to are in a situation that is similar to the situation 1 Grading on The Curve models. Reinterpret Grading on The Curve as a model of the greedy siblings situation. Articulate all the necessary assumptions. Carefully define the meanings of the parameters a , c , f , x and y in your reinterpretation.

Assume...

- (2pts) 1) Uncle gives all the money to the sibling who spent the most time with him
- (2pts) 2) The siblings have identical preferences.
- (1pt) 3) They act simultaneously.

Payoffs...

- (5pts) a : get all the money
- c : get half the money
- f : get no money
- x : utility from ^{more} time spent away from uncle
- y : utility from less time spent away from uncle.