

Beyond Extensive-Form Games

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Previously ... on multi-agent systems (tutorials and lectures).

- 1 Extensive-Form Games (game trees)

Task 1: Write down a sequence-form linear program for both players for the following game of a small “poker”:

- there is an ante of 1\$
- there is a limited deck of cards $\{J, J, Q, Q\}$
- each player receives a card
- player 1 either folds or bets 2\$
- player 2 either calls or folds
- player with the higher card wins

Task 2: Consider a repeated game:

	L	R
U	$(6, 6)$	$(0, -100)$
D	$(7, 1)$	$(0, -100)$

- What is a NE strategy in this game?
- How does the equilibrium using machines look like?

Task 3: A *mixed-integer linear program (MILP)* is a linear program that includes integer variables. Formulate the problem of computing a NE in a general-sum game as a MILP.