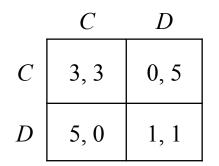
## Homework 7.1

- Here is the payoff matrix for the most commonly used version of the Prisoner's Dilemma.
  - (a) What is Player 1's maximin strategy?
  - (b) What is Player 1's minimax regret strategy?

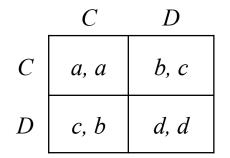


• Here is the payoff matrix for the generalized version of the Prisoner's Dilemma. Recall that the constraints on the numbers are as follows:

2a > b + c

For each possible combination of *a*, *b*, *c*, and *d* that satisfies the above constraints, what are

- (c) Player 1's maximin strategy?
- (d) Player 1's minimax regret strategy?



## Homework 7.2

• In the definition of a Bayesian game, why is the following condition part of the definition?

## • Condition 1:

The games in *G* have the same number of agents, and the same *strategy space* (set of possible strategies) for each agent. The only difference is in the payoffs of the strategies.

## Homework 7.3

- Suppose we have an auction in which the object's owner colludes with the auctioneer in the following fashion:
  - The owner pretends to be one of the bidders, and places bids on the object in an attempt to raise the selling price
  - If the owner's bid wins the auction, then the object remains the property of the owner (and the owner doesn't pay the bid)
  - What is the owner's optimal bidding strategy in each of the following auctions?
    - (a) English auction
    - (b) First-price sealed-bid auction
    - (c) Second-price sealed-bid auction