

Problem 1

Midterm 1 recap.

Problem 2

True or false? Leniency programs

- (a) Are excellent examples of the prisoner's dilemma.
- (b) Prevent the abuse of a dominant market position.
- (c) Are more effective when cartel members are impatient.
- (d) Involve criminal penalties for cartel participants.

Problem 3

Firm A and Firm B have formed a cartel. The Department of Justice (DOJ) suspects as much and wants to offer leniency to tempt either of the firms to expose the cartel. The possible actions and payoffs are as follows:

- If neither firm cooperates with the DOJ, then both receive payoff of \$10 million.
- If one firm cooperates with the DOJ and the other doesn't, then the firm that cooperates with the DOJ receives a payoff of \$5 million (they are fined and no longer receive such high cartel profit); and the firm that doesn't cooperate with the DOJ receives a payoff of $-\$5$ million (they are fined, no longer receive the high cartel profit, and serve time in prison).
- If both firms cooperate with the DOJ, then both firms receive a payoff of \$5 million (both are fined, neither receive high cartel profit, but neither serve time in prison).

Answer the following questions:

- (a) Is this game a prisoner's dilemma?
- (b) Let p denote the probability with which Firm A believes Firm B will cooperate with the DOJ. For what values of p will Firm A choose to cooperate with the DOJ?