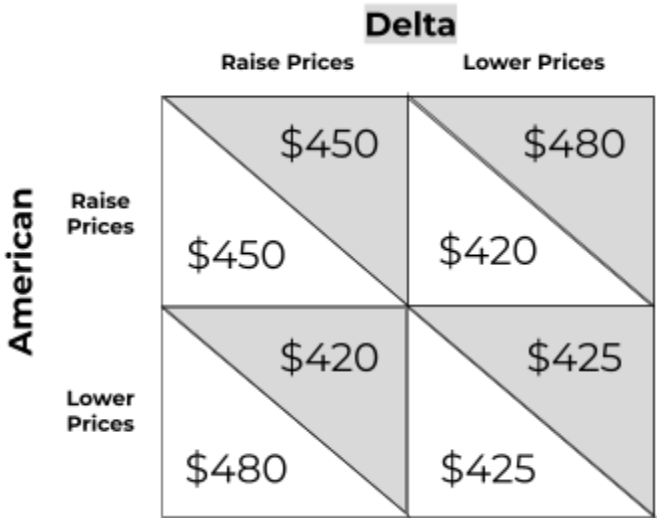
FEE Foundation for Economic Education
EST. 1946

Topic Question Bank

Game Theory



1. Two competing airline companies, American and Delta, each decide whether to raise their prices or lower their prices for a main cabin round-trip ticket. Based on the payoff matrix provided, the dominant strategy for American is to:
    A. Raise Prices, and the dominant strategy for Delta is to raise prices.
    B. Raise Prices, and the dominant strategy for Delta is to lower prices.
    C. Lower Prices, and the dominant strategy for Delta is to raise prices.
    D. Lower Prices, and the dominant strategy for Delta is to lower prices.

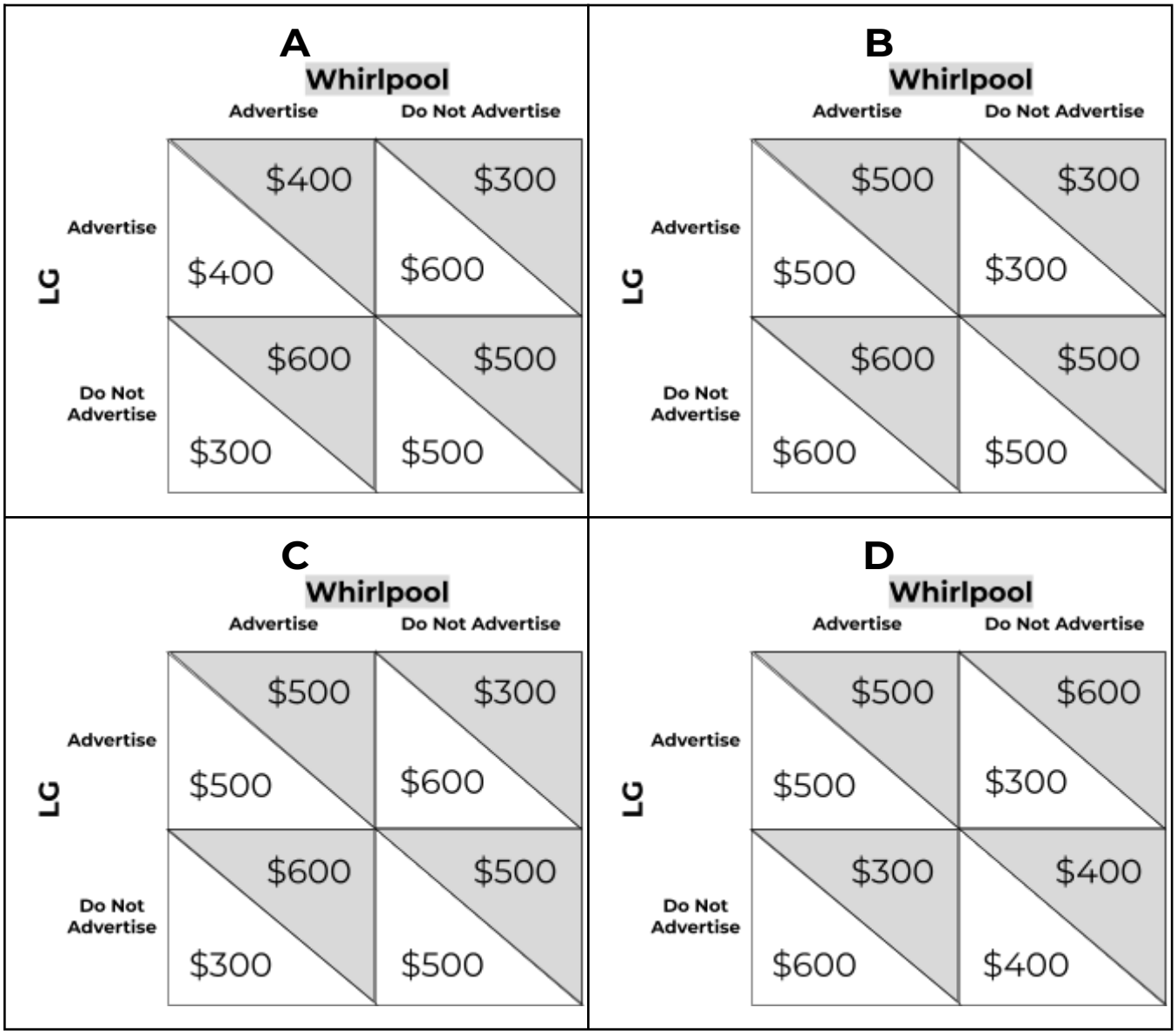
2. If the game is played only once, the most likely outcome is that:
    A. Both firms lower their prices.
    B. Delta lowers its prices and American raises its prices.
    C. Delta raises its prices and American lowers its prices.
    D. Both firms raise their prices.

3. If the two airlines collude and agree upon the best joint strategy:
    A. Both Delta and American will lower their prices.
    B. Both Delta and American will raise their prices.
    C. Delta will raise their prices, but American will not.
    D. American will raise their prices, but Delta will not.

Two washing machine companies, Whirlpool and LG, compete in an oligopoly market structure. If neither washing machine firm advertises they will each control 50% market share in the industry and earn $500 million profit each. If they both advertise, they will

each control 50% market share in the industry, but profits decrease by $100 million each to pay for the advertising. If one of the firms advertises and the other doesn't, the firm that advertises will increase sales and earn $600 million profit. The firm that chooses not to advertise would earn only $300 million profit.

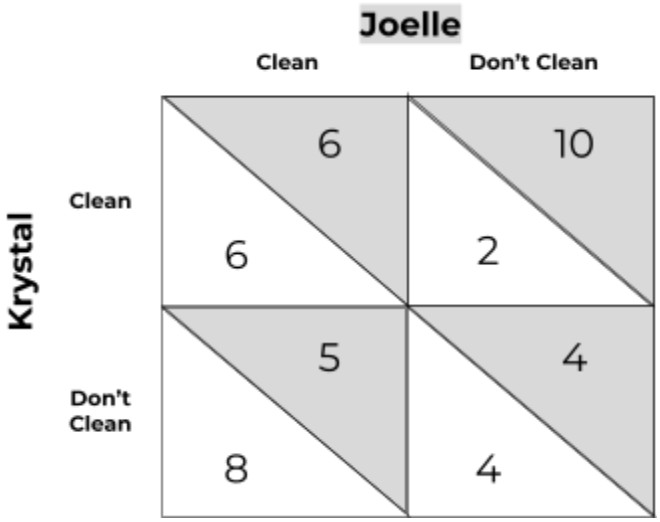
4. Which of the following is the correct payoff matrix for this situation?



5. What is the dominant strategy for Whirlpool?
    A. Advertise only if LG advertises.
    B. Advertise only if LG does not advertise.
    C. Advertise no matter what LG chooses to do with advertising.
    D. Do not advertise no matter what LG chooses to do with advertising.

6. The likely outcome of this situation is that Whirlpool earns:

A. $300 million profit and LG earns $600 million profit.
B. $500 million profit and LG earns $500 million profit.
C. $400 million profit and LG earns $400 million profit.
D. $600 million profit and LG earns $300 million profit.

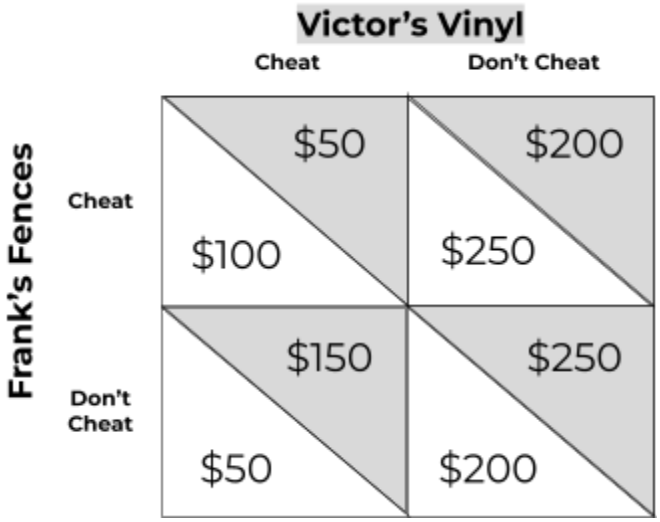


Krystal and Joelle are roommates and share a bathroom. The bathroom is getting fairly dirty and needs to be cleaned. Joelle and Krystal have to decide if one of them will clean the bathroom today. Either the bathroom will be cleaned by one or both of the roommates, or it will remain dirty if neither chooses to clean. Measuring happiness on a scale of 1 (very unhappy) to 10 (very happy), the possible outcomes are listed on the payoff matrix.

7. The dominant strategy for Krystal is to:
    A. Clean, and the dominant strategy for Joelle is to clean as well.
    B. Clean, and the dominant strategy for Joelle is to not clean.
    C. Not clean, and the dominant strategy for Joelle is to clean.
    D. Not clean, and there is no dominant strategy for Joelle..

8. If the game is played only once, the most likely outcome is that:
    A. Both Krystal and Joelle will clean.
    B. Joelle cleans and Krystal does not clean.
    C. Krystal cleans and Joelle does not clean.
    D. All three outcomes are equally likely.

9. In pursuing their own self-interest, Krystal will:
    A. Not clean whether or not Joelle cleans.
    B. Clean only if Joelle does not clean.
    C. Clean only if Joelle cleans as well.
    D. Clean regardless of Joelle's decision to clean or not.

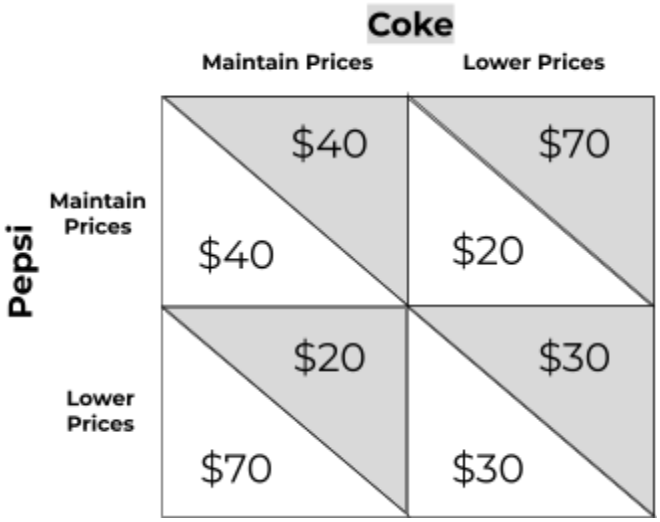


Two vinyl fence companies, Frank's Fences and Victor's Vinyl, form a cartel to set prices in the local market for vinyl fences. Even after making this agreement, both companies are worried the other may cheat. The payoff matrix displays the profit each will receive per day from these strategies.

10. Which of the following correctly identifies the likely outcome?
    A. Frank's Fences will not cheat and Victor's Vinyl will not cheat.
    B. Frank's Fences will cheat and Victor's Vinyl will cheat as well.
    C. Frank's Fences will cheat and Victor's Vinyl will not cheat.
    D. Frank's Fences will not cheat, but Victor's Vinyl will cheat.

11. Game theory is used to explain the strategic behavior between competing firms in which market structure?
    A. Perfect competition.
    B. Monopolistic competition.
    C. Oligopoly.
    D. Monopoly.

12. When does a Nash Equilibrium occur?
    A. When no player has a dominant strategy.
    B. When all players execute a strategy and have no incentive to deviate from it.
    C. When the two players collude to get the best possible outcome for both.
    D. When the player deviates from their dominant strategy and forces their opponent to do the same.



13. What is the dominant strategy for Coke?
    A. Coke will lower their prices only if Pepsi maintains its prices.
    B. Coke will lower their prices regardless of what Pepsi chooses to do.
    C. Coke will maintain their prices regardless of what Pepsi chooses to do.
    D. Coke will maintain prices if Pepsi maintains prices. If Pepsi lowers prices, Coke will do the same.

14. What is the dominant strategy for Pepsi?
    A. Pepsi will lower their prices only if Coke maintains its prices.
    B. Pepsi will lower their prices regardless of what Coke chooses to do.
    C. Pepsi will maintain their prices regardless of what Coke chooses to do.
    D. Pepsi will maintain prices if Coke maintains prices. If Coke lowers prices, Pepsi will do the same.

15. Consider the Nash Equilibrium for this game. If Coke and Pepsi decided to collude, what could they both do that would make each firm better off?
    A. Coke should maintain prices and Pepsi should lower prices.
    B. Coke should lower prices and Pepsi should lower prices.
    C. Coke should lower prices and Pepsi should maintain prices.
    D. Coke should maintain prices and Pepsi should maintain prices.