AGENDA Tues 11/10

- QOD #33: City Wheels/Easy Ride (2009B #3)
- Oligopoly
  - Game Theory (Build-a-game)
    - Exchange matrices with another partnership and determine strategy for each firm.
    - Review responses to the AQ #1-4 and AP #1-2
- Partner Practice Quiz
  - Answers to Partner Practice Quiz
- Study for Ch 10/11 Quiz on Thurs 11/12

QOD #33: City Wheels/Easy Ride

1) Solution

AQ #1-4 Solutions

1) This is a positive-sum game, because the sum of the payoffs for each firm is positive. The dominant strategy is for both firms to use a low-price strategy. This strategy will provide the highest payoff regardless of what the other firm does. The Nash equilibrium is for both firms to play the low-price strategy (low-low cell), because neither firm has an incentive to deviate from this strategy, given the strategy of the competing firm. The more favorable outcome would be for both firms to collude and use the high-price strategy. Both firms would earn a profit of $12, rather than $8 in this case. The problem is that both firms have an incentive to deviate from this strategy, given that the other firm is playing the high-price strategy. By pricing low, given the other firm is pricing high, profits increase to $15 (rather than $12 through cooperation).

AQ #1-4 Solutions

2) Either firm could threaten to flood the market to induce the other firm to choose the $40 pricing strategy. This threat is likely to be credible, because both firms benefit from the $40 pricing strategy. In a repeated game this threat may not be necessary, because the present value of cooperation may exceed the one-time gains from deviating from the $40-$40 pricing strategy. Thus, each firm may have an incentive not to deviate from the $40-$40 strategy, out of fear of lower profits in the future.

AQ #1-4 Solutions

3) The dominant strategy for Firm B is to build. The payoff from this build-strategy is greater than the alternative to not build, regardless of what Firm A does. Since Firm A will recognize this strategy, they will choose not to build, thus minimizing their losses. Thus, even as a first mover, Firm A will choose not to build. A “win” for Firm B may not materialize if the projections about profits are incorrect. For example, if there is a global downturn that reduces the demand for aircraft, and Firm B has already built the aircraft, this may result in a loss for Firm B.

AQ #1-4 Solutions

4) As the first player, it is optimal to choose 50. The reasoning is that your opponent could choose a number that significantly reduces your chances of winning if you didn't choose 50. For example, if you choose 1, the next player could choose 2; thus, the only way you win is if the number 1 is drawn. How about picking 25? Your opponent would pick 26; thus you only have a 25% chance of winning. How about 49? The same logic applies. The logic applies to companies that market similar (or identical) products. All of these companies choose a central location to maximize their share of customers, assuming consumers base their behavior on distance alone. But even if this isn't a valid assumption, the theory still applies for a homogeneous population.

AP #1-2 Solution

1) The fine would have to be greater than $3 million. Each of the firms is trying to increase its profit from $12 million to $15 million by moving to the low-price strategy. If the fine is greater than the expected gain in profit, the firm has an incentive to remain with the high-price strategy.

AP #1-2 Solution

2) (a) Each firm will choose to cheat and use a low-price strategy in the second game, hoping the other firm will remain with the high-price strategy.

b) The publicly stated policy is not credible. Each firm knows it would cheat in the second game, so it has every reason to believe the other firm would cheat, as well.

c) Given the answers in 2a and 2b, it is not reasonable to believe either firm would choose the high-price strategy in the first game, either. Each firm's dominant strategy is a low-price strategy, so that is the strategy each will select

Partner Practice Quiz CH 10-11 Answers

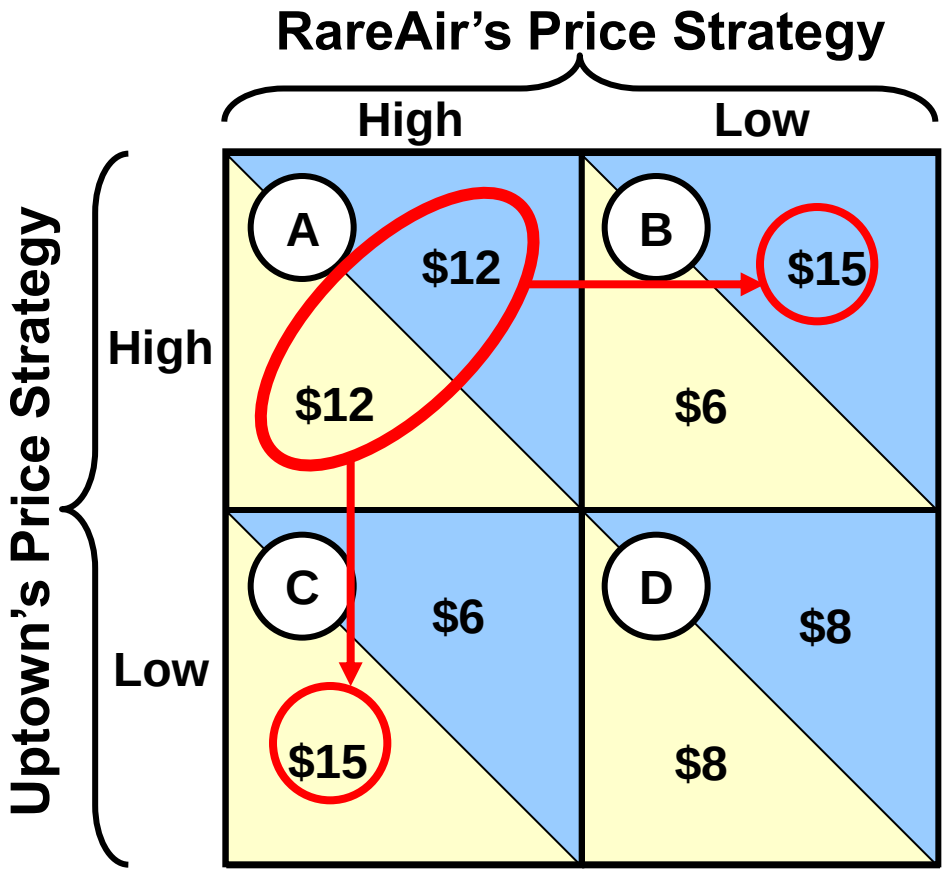
Page 1	Page 2	Page 3	Page 4
13. D	24. B	11. D	23. C
14. B	25. A	12. C	24. B
15. D	Problems	13. A	25. D
16. A	1a) chart	14. C	26. D
17. B	b1) 2450;	15. B	27. B
18. B	350; 0	16. B	28. A
19. A	b2) E, I,	17. C	29. A
20. B	b3) Pos/neg	18. B	30.D
21. D	2a) chart	19. C	Prob 1
22. C	b) 6; 11; 34	20. C	4; 80; 180;
23. C	(66-32)	21. B	dec; AC; =0
		22. A	Prob 2
			2; 5; 4; 6; 3;1

Game Theory Overview

- Oligopolies display strategic pricing behavior
  - Mutual interdependence
  - Collusion
  - Incentive to cheat
  - Prisoner's dilemma

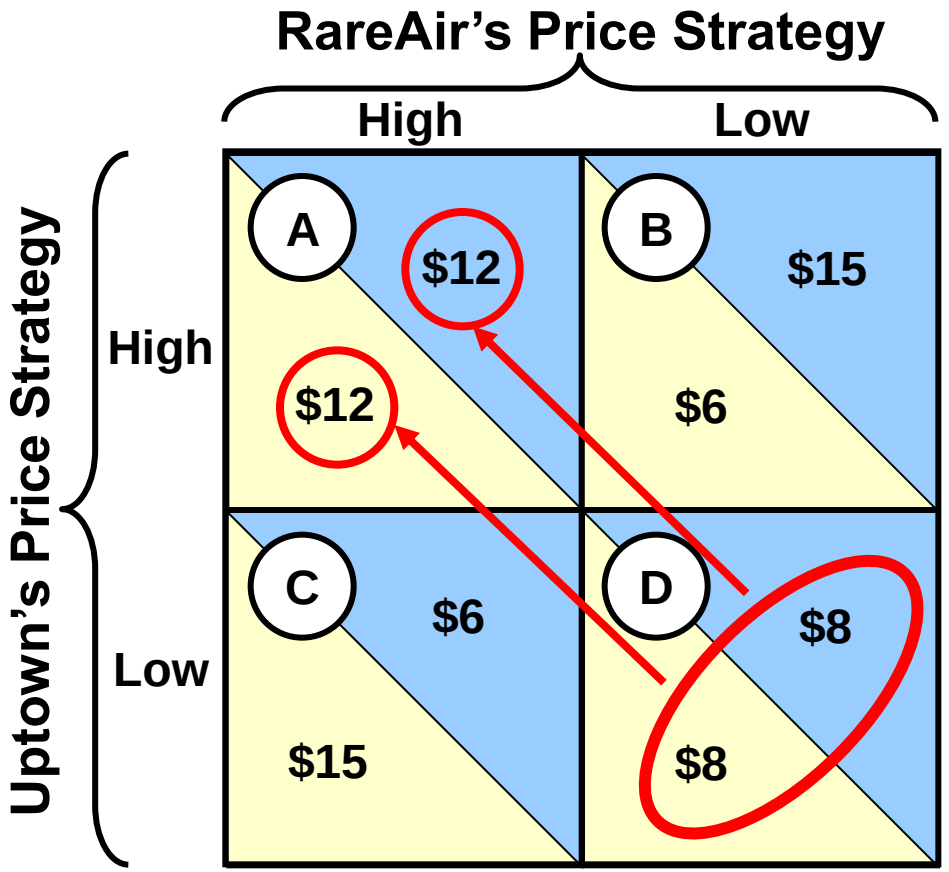
Game Theory Overview

- 2 competitors
- 2 price strategies
- Each strategy has a payoff matrix
- Greatest combined profit
- Independent actions stimulate a response



Game Theory Overview

- Independently lowered prices in expectation of greater profit leads to worst combined outcome
- Eventually low outcomes make firms return to higher prices.



Oligopoly and Advertising

- Prevalent to compete with product development and advertising
  - Less easily duplicated than a price change
  - Financially able to advertise

Advertising

Positive Effects	Negative Effects
Low-cost way of providing information to consumers	Can be manipulative
Enhances competition	Contains misleading claims that confuse consumers
Speeds up technological progress	Consumers pay high prices for a good while forgoing a better, lower priced, unadvertised version of the product
Can help firms obtain economies of scale	

Oligopoly and Efficiency

- Oligopolies are inefficient
  - Productively inefficient P > minATC
  - Allocatively inefficient P > MC
- Qualifications
  - Increased foreign competition
  - Limit pricing
  - Technological advance