

1. Show, using a graph with attendance on the horizontal axis, the effect on the NHL of the following changes:
 - a) A decrease in consumer income
 - b) The start-up of a rival league
 - c) An increase in the quality of play due to increased use of international players
 - d) A tax on each ticket sold

2. Draw a graph that shows the demand for seats at an NFL stadium. Assume that the supply curve for seating (attendance) is vertical. Show how each market would be affected if:
 - a) The prices of parking and food at the games decrease.
 - b) Televised games switch from free TV to pay-per-view only.
 - c) A new league forms with a team that plays nearby.
 - d) The quality of the team decreases dramatically.
 - e) The length of the season is increased.

3. Suppose the market demand for tickets to an Ohio State football game is $Q^d = 300,000 - 5000P$, and the supply is $Q^s = 100,000$.
 - a) What is the equilibrium price of a ticket to the game?
 - b) What would be the effect of an increase in consumer income on equilibrium price and quantity?
 - c) What would be the effect of a price ceiling set at \$20? What about a ceiling set at \$50?

4. Suppose a monopoly team faces a demand for a sporting event of $P = 100 - Q$. The associated marginal revenue function is $MR = 100 - 2Q$. If marginal cost is zero, what is the optimal quantity (of tickets) and price per ticket? If fixed costs are \$500, what would the level of profit be?

5. Suppose that the demand curve for tickets to see a football game is given by $Q = 100,000 - 100P$ and marginal cost is zero.
 - a) How many tickets would the team be able to sell (ignoring capacity constraints) if it behaved competitively and set $P = MC$?
 - b) How many tickets would it sell--and what price would it charge--if it behaved like a monopoly? (Hint: In this case the marginal revenue equation is given by $MR = 1000 - .02Q$.)

6. Suppose the Cleveland Indians raise ticket prices from \$10 to \$15 per seat and experience a 20% decline in tickets sold. What is the elasticity of demand for tickets?

7. Imagine that the face ticket price for the Super Bowl in Tampa Bay is \$800. Assume that the price elasticity of demand for tickets to the game was -1.5, that is a 10% increase in prices is associated with a 15% reduction in desired attendance. There are approximately 65,000 seats in at Raymond James Stadium. If the scalper's price was \$1,500, how many seats would there have to be in the Raymond James Stadium to accommodate the entire demand for tickets at the face price of \$800?

8. Does the fact that the Phillies sold only about half their tickets even in their best years while the Flyers regularly sell out mean that one team is failing to maximize its profits? Explain.

9. Why are season tickets cheaper than tickets for the same number of games when they are purchased individually?

10. Describe the sources of revenue and cost for a professional sports team in each of the four major sports. Explain the similarities and differences between leagues.

11. Do owners in sports leagues operate to make a profit? Offer evidence that suggests that they do. Also offer evidence of owners seemingly forgetting about the bottom-line to win championships.

12. What is the current revenue sharing arrangement in each of the four major sports?

13. Some researchers argue that revenue sharing is like socialism in that it removes the incentive to outperform rivals. Do you agree with this statement? Why or why not?

14. What are the advantages and disadvantages of allowing a new team to join an existing professional sports league?

15. It appears that sports leagues can earn more revenue from staging more performances, i.e. scheduling more games. So why don't they?

16. Why are the Washington Redskins more valuable than the New York Yankees? (According to Forbes Magazine, the franchise value of the Skins is \$1.1 billion compared to the Yankees' \$730 million.)
17. How did a quirk in the tax laws allow Bill Veeck to invent a way for sports franchises to make money by losing money?
18. Suppose an owner pays \$500 million to purchase a hockey team that earns operating profits of \$50 million per year. The new owner claims that \$200 million of this price is for the players, which he can depreciate using straight-line depreciation in five years. If the team pays profit taxes of 40 percent, how much does the depreciation of the players save the owner?
19. What is the benefit of declaring Subchapter S status for an owner of a professional sports team?
20. Suppose that each team in a league has a demand curve for generic advertising (a league-wide, nonteam-specific campaign) equal to $Q = 1000 - 5P$. If there are 20 teams in the league, and ads cost \$175 each, how many ads will the teams want to purchase as a group?
21. What do you predict about the popularity of PGA Tour events if it was a virtual certainty that Tiger Woods would win every week?
22. Babe Ruth was arguably one of the greatest offensive baseball players of all time having amassed a lifetime batting average of .342, slugging 714 home runs, and driving in 2,219 runs, among other accomplishments. Few people remember, however, that prior to joining the New York Yankees, Ruth was not only a great hitter, but was also one of the leading pitchers of his era while playing with the Boston Red Sox. Read the following short article, http://www.econedlink.org/lessons/docs_lessons/104_reading1.html, to learn more about some of Ruth's impressive feats. What economic principle explains why the Yankees decided to use Ruth solely as a hitter rather than a regular pitcher? What evidence does the article present to back up the Yankee's decision?
23. How would professional leagues be different if teams only had corporate affiliation (e.g., Microsoft Mariners) rather than city or state affiliation?
24. Why do sports leagues sometimes guarantee teams that no new teams will be placed within a certain geographic area surrounding existing teams?
25. Suppose there are two firms, a basketball team and a cable TV company, that are planning a vertical merger. Each firm is considered a monopolist in their own markets. The following demand and cost conditions describe the situation.
- Upstream firm: $P = 100 - 5Q$ [demand]
 $MC = 20$
- Downstream firm: $P = 150 - 5Q$ [demand]
- a) Suppose the two firms merge and that the both firms behave as a monopolist in their respective markets. The downstream firm takes the upstream firm's price as its marginal cost. Calculate the price, output, and profits for each firm.
- b) Suppose the upstream firm behaves competitively and the downstream firm behaves monopolistically. Recalculate the price, output, and profits for each firm. Under which situation are joint profits larger?
26. The Florida Marlins of MLB recently shed most of their best players. In 2006, their payroll was less than one-tenth that of the NY Yankees. Would a team in England's Premier League follow such a policy? Why or why not?
27. Given the following regression equation with t -statistics in parentheses:
- $$\text{Salary} = 566,400 + 71,928 \text{ Goals} + 20,000 \text{ Assists} + 2.1 \text{ All-Star}$$
- (3.45) (2.96) (3.5) (1.90)
- $R^2 = 0.95$
- Salary = NHL Salary in \$
- Goals = Number of career goals
- Assists = Number of career assists
- All-Star = 1 if All-Star in the previous season, 0 otherwise.
- (a) Interpret the R^2 .
- (b) Interpret the coefficient on All-Star. Can you trust the significance of the estimated coefficient?