120 points. Please write answers in ink. Use pencil for drawing graphs. Allocate your time efficiently. Good Luck and have a Merry Christmas.

   
a. What are the three conditions that must exist for a firm to engage in price discrimination? Are these conditions satisfied for professional sports franchises and airlines?
   b. Do professional sports franchises and airlines engage in price discrimination? Provide some examples.
   c. Now consider the information provided in the articles. Is it price discrimination to require that big people buy two tickets to fly on an airline? Is it price discrimination to charge fans higher prices to attend “good games?” Explain your reasoning.

2. The Washington State Utilities and Transportation Commission periodically launches crackdowns on unlicensed movers of household goods.
   
a. The commission’s enforcement chief said the crackdowns occur because of consumer complaints about damaged goods and price manipulation and because authorized carriers are complaining about growing competition from unlicensed movers. Which set of complaints do you suppose put the most pressure on the commission? How many consumers do you think know about the existence of the State’s Utilities and Transportation Commission? How many licensed movers probably know about the Commission?
   b. State officials have said that the legislature set strict requirements for entry into the moving industry in the 1930s because legislators were concerned that “unregulated, cutthroat competition would lead to a deterioration of service, and safety problems.” Does competition usually lead to a deterioration of service?
   c. The transportation director for the state commission is on record as believing that there are currently “more licensed movers than is necessary—as far as service rather than rates are concerned.” What is the relationship between high rates and sufficient service?
   d. What does the fact that there are dozens of unlicensed movers operating in the state indicate about the transportation director’s claim?

3. Consider the OPEC (Organization of Petroleum Exporting Countries) cartel.
   
a. Explain the motivation of oil producers to form a (supplier) cartel. Do the producers who form a cartel anticipate greater benefits from the agreement?
   b. Explain the conditions that must be met if suppliers are to be successful in realizing the benefits from forming a cartel.
   c. With few exceptions, the benefits that member suppliers receive from cartel agreements decline over time. Explain why.
   d. Has OPEC been able overcome the problems that beset most cartels? Explain.
4. A major step toward mastering the economic way of thinking is learning to reason in terms of supply and demand. Your answers are less important than the reasoning with which you arrive at those answers. You should probably begin each case by sketching a demand and supply graph. Then ask yourself whether the event described would affect the supply curve or the demand curve, in which direction the curve would move, and what effect that would have on the price and the quantity exchanged. Don't be content merely to conclude that the price will rise or fall. Predict the magnitude of the change in the price and quantity exchanged in both the short- and long-run.

a. The Bush Administration recently imposed tariffs (import taxes) on Canadian softwood lumber imports to the United States. Softwood lumber is made into 2x4s and plywood, which is used to build new homes.

1. How will the tariffs affect the market for new homes?
2. How will the tariffs affect the market for softwood lumber produced in the United States?
3. How will the tariffs affect the market for steel 2x4s?
4. How will the tariffs affect the market for pulpwood? Pulpwood is produced from trees to make paper. Assume that land that is suitable for growing trees that supply softwood lumber can be used to grow trees that supply pulpwood.

5. The figure below illustrates the demand curve and marginal cost curve for a price searcher.

a. Indicate the firm’s profit maximizing price and quantity.
b. Indicate the firm’s producer surplus (seller’s gain), the buyers’ consumer surplus (buyers’ gains), and the deadweight loss.
c. Explain how this price searcher might be able to increase its producer surplus, increase consumers’ surplus, and reduce the deadweight loss all at the same time.
December 3, 2002

Fans, Meet the Barry Bonds Tax: Paying More for the Good Games

By STEFAN FATSIS | Staff Reporter of THE WALL STREET JOURNAL

Willing to pay just about anything to watch your favorite sports team play its archrival? Increasingly, pro teams are making sure that you do.

Baseball's New York Mets last week told fans they would have to pay up to twice as much next year to watch the crosstown Yankees or home-run king Barry Bonds as the sad-sack Florida Marlins. Hockey's Ottawa Senators jacked up prices 20% this season for games against the hated Toronto Maple Leafs and Stanley Cup champion Detroit Red Wings.

The Pittsburgh Penguins have tacked on $5 to weekend game prices, and $5 to weeknight skates against three of their most high-profile opponents.

Known as "variable pricing," the practice of charging different prices for the same seat will be familiar to anyone who has ever bought a plane ticket or a seat at a Broadway play. But it's a curveball in the tradition-bound sports business, where ticket pricing for decades was unchanged. The same seat for a regular-season game costs the same amount, regardless of date or opponent.

"It's always been that you don't want someone paying $100 or $200 to find himself sitting next to someone who's paying 30 bucks," says Rick Burton, who directs a sports-marketing center at the University of Oregon.

But that fear is waning as teams scrap for every dollar during a sports-business slowdown. Soaring player salaries and debt payments tied to stadium construction are outstripping revenue for many teams. The lackluster economy, years of ticket-price increases and a creeping fan disgruntlement also are cutting into attendance: Major League Baseball suffered a 6% drop at the gate this year.

Enter variable pricing. Sports-industry executives say the strategy can actually be a clever way for teams to boost ticket prices under the guise of giving fans a break. Nearly a quarter of baseball's 30 teams will offer staggered prices for the 2003 season -- even the New York Yankees: Despite setting a franchise attendance record, that team plans to offer $5 upper-deck seats at eight weekday games against mostly weak opponents. (Those seats would otherwise go unsold.)

Baseball and hockey are the biggest users of the new pricing models because of the sheer number of home games per team -- 81 in baseball and 41 in hockey -- and because of labor and financial woes that have left teams in worse shape than in basketball or football.

In principle, such pricing is a simple way of boosting revenue by capitalizing on the sure things on the schedule. Despite charging extra to see the Yankees last summer, baseball's Colorado Rockies drew a franchise-record attendance for a three-game series against the star-powered New York team. The Penguins brought in an extra $1 million in ticket revenue last season thanks
to their weekend-game surcharge, a boost that helped the team break even just a few years after emerging from bankruptcy court. "If you can get more revenue in for games that are better attractions, so be it," says Tom Rooney, president of Team Lemieux, which operates the Penguins.

Under the Mets' plan, fans will have to fork over $53 for the best seat at 17 games for which the club already is assured of big crowds; that's an increase of $10 from the highest ticket price this past season. But the team also will offer 43 games with prices unchanged or lower. That helped allow the Mets, who finished last in their division in 2002, to trumpet the plan as holding ticket price increases to only 4% on average.

But with jumps of 23% to 33% for the most desirable games, Mets fans will probably fork over substantially more overall. The price cuts "for games people wouldn't have attended anyway is far outweighed by the revenue increase they'll receive from upper-tier games," says Kurt Hunzeker of Team Marketing Report, a Chicago sports-marketing consulting firm.

The new plans carry some risk and complications. The plans require teams to value opponents months before the season starts, "and that valuation can change very quickly," says Bernie Mullin, a senior vice president at the National Basketball Association, which has steered its teams away from the strategy. Indeed, the Mets included the Philadelphia Phillies in their "value plan" -- but the Phillies just became a better draw by signing slugger Jim Thome Monday.

In addition, teams run the risk of cheapening their product in the eyes of fans. The cheapest Mets ticket, for instance, will be $16 in the top pricing tier, vs. $8 in the bottom one.

Assuming that fans will turn out for the best games despite a price increase could be a mistake. Last month, the Ottawa Senators had nearly 2,500 empty seats for a game against the Montreal Canadiens, which carried a 10% surcharge; that game is usually a sellout or close to it. The team also fell short of a sellout last week against rival Toronto, a matchup that usually draws a capacity crowd.

Senators fan Steven Duford says he skipped both games because of the price increases. "I do not agree that I have to pay extra to see certain teams," he says. "I don't pay less for teams that usually don't draw."

That sort of thinking has led some clubs, including the San Francisco Giants, to avoid inflating prices when marquee opponents come to town. Under the Giants' tiered pricing plan, season-ticket holders pay the lowest prices. Next in line are single-game tickets to midweek games. And the priciest are single-game tickets for Opening Day games, weekends and holidays. Price discrepancies among the packages range from $1 per game for bleacher seats to more than $20 per game for long-term box season tickets.

The Giants' main goal: Take advantage of fan demand without drawing distinctions among opponents -- or alienating season-ticket holders, who account for more than two-thirds of sales. The plan is "reinforced value for our season-ticket holders that they have best pricing in ballpark," says Tom McDonald, the Giants' senior vice president for marketing.
Giants President Larry Baer says the plan netted an additional $1 million in ticket revenue this past season, helping the debt-laden club finish with a slim profit of around $100,000. While Mr. Baer says his team’s plan has worked, he cautions against pushing ticket discrepancies further. "Fans don't want to get the feeling the club is in it for every last dollar," he says.

Write to Stefan Fatsis at stefan.fatsis@wsj.com