Sports Economics
Spring 2012
Practice problems for Exam 1

Note: Following are problems that require calculations. This is not the only type of question that will be on the exam. There will be questions that involve the graphs we have used in class, as well as questions requiring a short answer. As stated in the syllabus, you will need to understand and apply the concepts discussed rather than reiterating statements made in class or in the articles. You also should be familiar with the articles for each topic.

1. Suppose the demand for tickets to a football game is given by the equation: $Q = 100,000 - 100P$, and marginal cost is zero. How many tickets will the team sell if it is in a perfectly competitive market? If the team is a monopoly, what quantity of tickets should it sell, and what price should it charge (assuming it is not able to price discriminate)?

2. Suppose that there are two teams in the same market with demand $Q = 100,000 - 100P$. If the teams do not collude but rather compete, what quantity of tickets will each sell, and at what price?

3. Suppose the teams (in question 2) decide to collude. What quantity of tickets would each sell, and at what price?

4. Suppose a league has six teams with the following winning percentages: .750, .600, .500, .500, .400, and .250. Compute the standard deviation of winning percentages.

5. If a league has a 50 game schedule, what is the “ideal” benchmark standard deviation?

6. Suppose a team raises ticket prices from $30 to $40 per seat, and the number of tickets sold falls by ten percent. Was increasing the ticket price from $30 to $40 a good idea?

7. What does the following equality explain? $(P-MC)/P = 1/e$

8. Explain the two components of marginal revenue.

9. Market demand is given by $Q = 20 - P$. There are two teams competing in this market, and each team has a total cost of $C(Q) = 2Q$. If the teams merge, production cost falls to $C(Q) = Q$. Show mathematically and illustrate using a graph, whether the U.S. Department of Justice should allow a merger of the two teams. (This will require that you calculate the loss in efficiency that results from the market structure changing from competitive duopoly to monopoly, and the gain in efficiency from the decrease in production costs that the monopoly provides.)

10. Briefly explain the primary goal(s) of antitrust laws.