Homework 11

1. The Taos Pueblo is an ancient American Indian community in New Mexico that admits tourists. The admission fee is $5 per car plus $5 per camera.

   a. Give an explanation for this based on price discrimination.

   *Suppose there are two types of tourists, those who really love visiting the Pueblo and those who are only marginally interested. The highly interested visitors are probably less price sensitive (demand is more inelastic) and also more likely to take pictures, and the Pueblo would like to charge them a higher price. Because tourists are unlikely to announce which type they are, charging an additional fee for cameras results in an effectively higher price for these tourists.*

   b. Give an explanation for this that is NOT based on price discrimination.

   *Suppose photo-taking tourists are more likely to tramp around, to stay longer, to drive more on the surrounding roads, or take other actions that lead to higher costs for the Pueblo Indians. In this case, the difference in prices may reflect differences in costs, not differences in demand.*

2. Federal Express offers two kinds of overnight delivery. There is priority overnight, which is guaranteed to reach its destination by 10:30 the next day, and standard overnight, which is guaranteed to be delivered by 3 pm the next day. Priority costs 20% more than standard. Federal Express will often make 2 delivery trips to the same office in the same day just to avoid delivering the standard overnight packages before 10:30. How can you explain this behavior?

   *This is likely due to price discrimination. If standard overnight packages are frequently delivered at the same time as priority, Fed Ex has no way to segment the market and charge high demanders more for the early delivery—all customers would buy standard delivery and pay a uniform price. The two delivery times allow Fed Ex to distinguish customers on the basis of willingness to pay for early delivery.*

3. What is the Prisoner’s Dilemma? In what way does it apply to members of cartels?

   *The Prisoner’s Dilemma is a game where both parties have an incentive to “cheat” on their agreement regardless of the other player’s actions. Both players have a higher payoff when neither cheats, but this is not a sustainable equilibrium. The incentives for a cartel are similar: if cooperating is defined as producing a restricted quantity and selling at a higher price, members have an incentive to undercut the other cartel members. This will tend to produce the competitive outcome.*
4. In many industries, workers are required to belong to a union and pay union dues even if they would prefer not to. True or False: Workers would be better off if each one could choose whether to belong to the union. Explain your answer.  
This problem is similar to the Prisoner’s Dilemma. Suppose that higher overall dues mean the union can get a better agent to negotiate the wage package, but any one individual’s dues are a small enough amount so as to not make a difference. Paying dues therefore produces a benefit which members share with each other. If I know that other workers will pay dues, I would be better off not paying dues and just getting the better representation that comes from everyone else’s dues (mine alone don’t make much of a difference). If other workers are not going to pay dues, I would be better off not paying dues—again my dues alone don’t make enough of a difference. As a result, no one has any incentive to pay dues individually, even though collectively the workers are better off with union representation.

5. **True or False?** If all the firms in an industry price identically products identically, is that evidence that they have formed a cartel and are colluding with one another?

*False. Competitive industries will also price products identically.*

6. Why do firms merge horizontally with one another?  
2 reasons: to gain greater market power and to take advantage of economies of scale.

7. What is vertical integration? If Microsoft mergers (a down stream seller of software) with an upstream software development firm like Firefox, do both consumers and Microsoft benefit from the merger?

*Vertical integration is when a supplier and demander of an intermediate product (an input) merge. Consumers may benefit from a merger if the upstream firm had market power. If Firefox has market power and restricts the quantity of browsers to keep prices higher than a competitive price, a merger will increase the quantity of browsers and lower the price of the input. This will lower Microsoft’s costs, which in turn will lower the price of the final package of windows+browser to consumers.*