NAME(S)____

FE461 Practice Problem
Fourth Homework Set
Due March 3rd

1. After several years of sever price competition that damaged Boeing's and Airbus's profits, the two companies have recently pledged that they will no sink into another price war. However, in June 1999, Boeing made an unusual offer to sell 100 small aircraft to a leasing corporation at special discount prices. (Although customers never pay list prices, it was felt that this deal was particularly attractive.) Boeing's move follows a similar one by Airbus. Based on chapter 8 and class discussion, why do you think it is so difficult for aircraft manufactures to collude and avoid price wars? (Be sure to focus on this industry, don't just list factors!)

2. In a market with annual demand Q = 150 – 2P, there are two firms A and B, that make identical products and these firms compete over prices. Because their products are identical, if one charges a lower price than the other, all consumers will want to buy from the lower-priced firm. If they charge the same price, the consumer is indifferent and end up splitting their purchases evenly between the firms. Marginal cost is 25 and there are no capacity constraints and no fixed costs.

a. What are the single-period Nash Equilibrium Prices, P_A and P_B?
b. What prices and quantities would maximize the two firms' joint profits?
c. If firms play this game for only two periods and δ =1, would they choose the price in you found in part (a) or the price you found in part (b)? Explain.
d. Explain what and δ =1 implies.
e. What discount factor, δ, would sustain the price you found in part (b) given that players play this game an infinitely repeated number of times?

3. "Price wars imply losses for all of the firms involved. The empirical observation of price wars is therefore proof that firms do not behave rationally." True or False?