14.271 Glenn Ellison
Fall 2001 Sara Ellison

Problem Set #2

Due September 19, 2001

1. Tirole exercise 1.8, page 83.

2. Use the model of two-good monopoly pricing to comment on the viability of free ISP's. Yahoo Finance is a good source for getting income statements. Netzero and Juno are publicly traded companies that are not bankrupt.

3. Write down a 3^{rd}-degree price discrimination model in which welfare would go up if the monopolist were forced to charge a uniform price. Would a monopolist ever decide to lower his prices in both markets when he is forced to charge a uniform price?

4. Suppose you are the manufacturer of surfboards which are sold in two separate markets: California and Hawaii. You have factories in both locations, and each can produce an unlimited number of surfboards at a constant marginal cost of $10 per surboard. Over the last fourteen weeks you've conducted an experiment by varying your prices each week. Your sales at various prices were:

Price	Q in Calif.	Q in Hawaii
10	130	31
11	106	27
12	105	31
14	100	24
15	60	24
16	70	25
17	65	18
18	60	23
20	48	21
22	28	14
24	12	18
25	2	14
26	1	10
30	0	9

(a) Use an OLS regression to estimate linear demand curves for each market.

(b) Given these estimated demand curves what prices would you set in each market? How would you change these prices if antitrust laws required that you set a common price across both markets?

(c) How would profits and consumer surplus be affected by the shift to uniform pricing?

(d) Suppose retailers can ship surfboards between California and Hawaii for $4 per board. Would this disturb your discriminatory pricing strategy, and if so what would your response be? How is this problem similar to and different from a standard 2^{nd} degree price discrimination model.