ECO410H: Practice Questions 4

1. Consider the distribution of industry sales by firm in the table below.

Firm	1967	1977	1987
A	200,000	625,000	1,000,000
B	12,500	750,000	1,250,000
C	12,500	500,000	500,000
D	12,500	250,000	250,000
E	12,500	375,000	–
F	–	–	2,000,000

   (a) Calculate the four-firm concentration ratio and the HHI for each of the 3 years.

   (b) For this industry, which of the concentration measures is more informative?

   (c) Are the high measures of concentration necessarily indicative of market power for this industry?

2. For a market in Bertrand NE p1 = \$26.00, p2 = \$31.00 and p3 = \$31.00. Each firm has constant marginal costs. Firms 1 & 2 propose merging. Market demand:

$$q_1 = 80 - 6p_1 + 3p_2 + 1p_3$$

$$q_2 = 107 + 3p_1 - 6p_2 + 1p_3$$

$$q_3 = 291 + 1p_1 + 1p_2 - 6p_3$$

   (a) Is the proposed merger in a safe harbor according to the US Horizontal Merger Guidelines? Canadian Merger Enforcement Guidelines? Explain.

   (b) Find each firm's marginal cost of production.

   (c) Considering the antitrust implications of the proposed horizontal merger of Firms 1 and 2 what would you put forward as a compelling theory of harm?

   (d) Would the proposed merger substantially lessen competition? Do a *quantitative* analysis. To make your analysis easier: post-merger Firm 3 will charge a price of \$31.56. Include a written explanation of your analytic results.

3. Consider a merger between Firms 3 and 4. Market shares are reported as: $s_1 = 0.40$, $s_2 = 0.25$, $s_3 = 0.15$, $s_4 = 0.15$, and $s_5 = 0.05$. What are the key pieces of additional information you would require before making an assessment about the potential anticompetitive effects of this merger?

4. Consider an industry with three firms that compete in quantities. The inverse market demand is given by $P = a - bQ$. The constant marginal costs of the firms are denoted by c. Firms 2 and 3 propose merging and claim that there would be substantial merger-specific efficiencies. Find the critical marginal cost of the merged firm, c_M, such that the merger would be allowed *under a price standard*. (Hint: The critical marginal cost is the threshold for the marginal cost for the merged firm such that the merger meets a particular standard, which in this case is the price standard. In other words, how low would marginal costs need to be such that the merger

would not raise antitrust concerns regarding unilateral effects? c_M will be a function of the parameters of this model.)

5. TRUE/FALSE/EXPLAIN Consider a small town with only two hospitals. Antitrust enforcers should definitely block a merger of these hospitals because it is a merger to monopoly.

6. TRUE/FALSE/EXPLAIN The combined output of two merging Cournot competitors decreases as a result of the merger.