1) For a purely competitive firm in long run equilibrium, draw the ATC and MC curves and show the output price. Show how the individual firm’s profit maximizing output changes as the price rises.

2) Suppose that the cost per unit to produce some good is always $10, regardless of the size of the firm producing it and there are no fixed costs. What does this tell us about returns to scale (to the industry)? Suppose that a profit maximizing monopolist produced this good - draw a graph showing demand, marginal revenue, MC, ATC and the quantity produced. Now suppose that this monopolist was broken up into many small purely competitive firms - now show the amount produced by this competitive industry. Compare the quantity produced by the monopolist with the allocative efficient amount. Depict the “dead weight loss” (= excess burden) from monopoly on the diagram.

3) Why is marginal revenue, (MR), below the price for a monopolist?

4) Would a monopolist (that could not price discriminate) charge “as high a price as they could get”? What happens to the monopolist’s sales as they raise their price?

5) If better substitute goods for the monopolist’s output become available, what happens to the monopolist’s demand curve and to its profits? Can a firm that is the only producer in an industry/market with no barriers to entry earn economic profits. What price could this firm charge to deter entry of competitors? Would this firm behave like a theoretical monopolist as described in our textbook? (this market would be called “contestable” as compared with “competitive”). How do these issues relate to the importance of barriers to entry in defining a theoretical monopolist?

6) Is it possible for a monopolist to earn negative economic profits (a loss)? If so draw this.

7) Draw the demand curve, MC, and ATC curves for a natural monopolist that is maximizing profits. Why is there allocative inefficiency. Could the monopolist make profits if it were forced to price where P = MC?

8) There are three types of price discrimination - First Degree = “Perfect” where each buyer is charged the maximum price they would be willing to pay; Second Degree = “Unit” where each buyer is charged different prices for different units (e.g. price per unit is lower for all units beyond some number); and Third Degree = “Group” where buyers are divided into (two) different groups and each group is charged a different price. Which of these is depicted in Mankiw, Figure 15-10 (pg. 338)? Give two real world examples of price discrimination that you have observed.

9) In order to price discriminate a firm must have a downward sloping demand curve, i.e. some “monopoly power.” Name two other requirements for a firm to be able to price discriminate.

10) What would happen if a Canadian wine seller charged twice as high a price for a bottle of wine in Canada as in the U.S.? Would your answer change if it were illegal to transport wine across the border into Canada?

11) Would a monopolist ever produce a quantity such that it was on the elastic part of its demand curve? Why or why not?

12) How might temporary monopoly power to a firm be beneficial to society? (think of a patent)

13) Name two ways that advertising may be beneficial to consumers.

14) What is the difference between “Monopolistic Competition” and “Monopoly”?

15) How does a producer cheat on a cartel that it is a member of? Why would they want to cheat?

16) How do falling transportation costs and decreased barriers to international trade effect the ability of firms to effectively collude? How about the rising importance of goods with high fixed cost of production but low marginal cost, and for which the value to one consumer increases as more and more other consumers use it (like software)?
17) There are four types of markets/industries mentioned in this course. Briefly list the most important assumptions and the theoretical implications of each: i) Pure Competition, ii) Monopoly, iii) Monopolistic Competition, & iv) Oligopoly. What would happen in each type of industry if positive economic profits (above normal accounting profits) were being earned by firms? Which do you think is the best description of the market for each of the following - briefly, why? i) Grade AA eggs, ii) Shampoo, iii) Autos, iv) Electricity

18) The U-shaped cost curves below are for a perfectly competitive firm. Show its profit maximizing level of output when the market price is $P^*$ and shade in the area that represents its economic profit. If this industry is made up of many firms identical to this one what will happen to the number of firms over time. Will the price stay at $P^*$?

19) The diagram below is for a profit maximizing theoretical monopolist as described in our text. Clearly label its level of output $Q_m$ and its maximized level of profit. Label the (allocatively) efficient level of production $Q_e$. Name three different ways that government could increase efficiency relative to the case of the pure unregulated monopolist - which of these three are least desirable when economies of scale are important to this industry (when the short run ATC curve will be higher if production is done by a number of small firms, rather than one big one)? If there is a single seller in a market, but there are low barriers to entry of new firms, what would happen if the firm tried to set the monopoly price (such a market it called “contestable.” Is there a good reason for government to intervene in such a market?

20) The diagram below to the left is for a typical firm in a purely competitive industry, and to the right for the entire industry. Assume 1000 identical firms. If price = $P_1$ is the industry in long run equilibrium? How can we tell? Suppose all firms can collude, agree to produce only 8 units of output each, and prevent entry of any new firms. Shade in the profits of the typical firm if all firms produce just 8 units. Given price = $P_2$, is $q=8$ the profit maximizing level of output for this typical firm? How is this related to the firm’s incentive to “cheat”? What happens to price as firms cheat on the agreement?