

This review sheet is intended to cover everything that could be on the exam; however, it is possible that I will have accidentally left something off. You are still responsible for everything in the chapters covered except anything that I explicitly say you are not responsible for. Therefore, if I left something off of this sheet, it can still be on the exam. There will be no multiple-choice questions. Most of the questions will be like the ones in the homework assignments, and possibly a few definition questions, but I am more likely to ask questions that make you use the definitions rather than recite them. I will probably ask one of the questions from the book at the end of the chapters.

The review session will be at a time to be determined in class, probably Tues. 2/17 in the normal room.

Chapter 10: What are *monopoly*, *monopsony*, *monopoly power* and *monopsony power*? Why isn't $D = MR$? Be able to prove MR starts where AR starts, but is twice as steep. Prove that $MR = MC$ is profit maximizing but $D = MC$ is socially optimal. What is the formula for rule of thumb pricing and why should it work? What is the equation relating MR and elasticity? Be able to prove a monopoly does not have a supply curve. (Figure 10.4 does it two ways.) Be able to find how a monopoly with two plants determines their output, price, and how much each plant makes. What is the *Lerner Index of Monopoly Power* and how do you calculate it? Be able to find consumer surplus, producer surplus, and deadweight loss. What is *rent seeking* and why is it a problem? How do *price ceilings* affect monopolies? What are *natural monopolies*? Explain why they are called that. What are *rate-of-return regulation* and what are its potential problems? Understand the *monopsony* diagram. Understand why we re-label the lines as ME, AE, and MV and why they take their shapes. Find the deadweight loss. Why can't we draw a diagram for the *bilateral monopoly*? What is meant by *parallel conduct* and *predatory pricing*? Why are they illegal? What are the three ways the antitrust laws are enforced?

Chapter 11: Be able to draw the diagram for *first-degree price discrimination*. Explain how the firm determines its output and whether or not it is efficient from society's point of view. What is *second-degree price discrimination*? Why would a firm do that rather than first-degree price discrimination? How does it help the firm capture consumer surplus? Show that on a graph. What is *third-degree price discrimination*? When will it work? Be able to show it on a graph. What determines the ratio of the prices for the two customers? Be able to explain the graph for *inter-temporal price discrimination* with constant marginal costs. Be able to explain the graph for *peak-load pricing* with increasing marginal cost curve. Understand how a *two-part tariff* works. Understand why the graph of profits takes the shape we drew. For *bundling*, understand how we determine whether to buy the bundle or not. Do the same for *mixed bundling*. For simplicity, assume the marginal costs are zero so do not have to worry about costs. Besides bundling, what is another form of *tying*? Do not worry about advertising.

Chapter 12 through 12.3: What types of industries are *monopolistically competitive*? Why are they called that? Understand the diagram for a firm like that in the short-run and the long-run. Note: profits are found from ATC at quantity Q, not the minimum of ATC. How do they compare to perfectly competitive firms? What is meant by *duopoly* and *oligopoly*? Be able to find the Cournot equilibrium using the graph of costs and demand to get the reaction functions. Then find the Cournot-Nash equilibrium. Find the cooperative and competitive equilibria on the reaction function graph. Why does a Von Stackelberg leader have an advantage? Understand the Bertrand model for an industry with identical products. (The book does it for products which are not identical.)

Non-graded Homework Assignment #2A to be reviewed with Assignment #2.

1) (35 points) Draw the MC/ATC/AVC/D diagram for a monopolistically competitive firm which is making positive profits. Find the quantity produced, price charged, and the profits. Explain how you found them. Show what happens over time to the diagram. Explain why the curve(s) moved as drawn.

2) (45 points) Suppose two firms in an Cournot-Nash duopoly have constant marginal costs of \$4/unit. The products are identical and the demand for the industry is given by $Q = 10 - \frac{1}{4}P$. Draw the diagram necessary to derive the reaction functions (a.k.a., best response functions). Explain how you got the diagram. Draw the reaction functions explaining how you found them. Find the Cournot-Nash equilibrium outputs and price. Find the competitive outputs and price. Find the collusive outputs and price. Explain how you found all of those quantities and prices.

3) (10 points) Explain why the Von Stackelberg leader makes more profits than the follower.

4) (10 points) Explain why a Bertrand-Nash duopoly produces the competitive outputs when the products are perfect substitutes.