

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 TBD in class, probably Thursday 2/27.

Chapter 4: Be able to show the impact of a **price ceiling** on a supply/demand diagram, including showing **consumer surplus, producer surplus, black market profits, and dead weight loss**. How else are the consumers also hurt? Be able to show a **price floor** on the supply/demand diagram. How does the market react to it? Be able to show the impact of a **tax** on a supply/demand diagram, including showing consumer surplus, producer surplus, **tax revenue**, and dead weight loss. Be able to determine **tax incidence**. How does the elasticity of demand and elasticity of supply relate to the tax incidence? Be able to find **marginal tax rate, total taxes paid, and average tax rate** from a tax table. Know what **progressive, regressive, and proportional taxes** are. Understand why the **Laffer Curve** looks as I drew it, *which is different from how the book drew it*. Be able to show the impact of a **subsidy** on a supply/demand diagram, including showing consumer surplus, producer surplus, **subsidy**, and dead weight loss. *Note that I gave the subsidy to the producer because that is the more common type of subsidy. However, that means the graph I will expect is not the one in the book.*

Chapter 5: Why is **MB = MC** the best place to be? Understand how the following can cause **market failures** (the market to be inefficient), **lack of competition, negative externalities, positive externalities, public goods, and information problems**. What is the best policy for the government to take for the first four market failures? Be able to show the solutions for the externalities on the supply/demand for the product. What is the difference between market failure and **government failure**?

Chapter 7: What is meant by **utility** and **MU**? What is the **Law of Diminishing Marginal Utility**? Know what  $MU_x/P_x$  means and why it should equal  $MU_y/P_y$  assuming you are buying both goods. Know what the **income effect** and **substitution effect** are and how they relate to the demand curve. Understand why every point on a straight line demand curve has a different elasticity. *Knowing that  $E_p$  can be rewritten as  $(\Delta Q/\Delta P) \cdot (P/Q)$  can be helpful. If you are having problems remembering any of the elasticity formulas, always remember that  $\Delta Q$  is on top because we want to know how quantity changes in reaction to events.* Understand whether an elastic demand is flatter or steeper. Understand how the elasticity of demand relates to **marginal revenue** and **total revenue**. *See the formula on the back of this page.* Understand the economics as to why that relationship occurs. Be able to calculate **income elasticity of demand ( $E_I$ )**, **cross-price elasticity of demand ( $E_{XY}$ )** (not in the book), and **elasticity of supply**. For all three of those elasticities, you have both arc formula and point formula. Understand what the number is telling us.  $E_I < 0$  is inferior,  $0 < E_I < 1$  is normal,  $E_I > 1$  is a luxury.  $E_{XY} > 0$  means

they are substitutes and  $E_{XY} < 0$  means they are complements.  $E_S$  has the same criteria as  $E_P$ . Understand why those numbers tell us that information. Logic should help you to understand it. For example, if the price of one good goes up and the quantity sold of the other good goes up, they must be substitutes. That is  $E_{XY} > 0$ .

$$MR = P \left[ 1 + \frac{1}{E_P} \right]$$

Non-graded Homework Assignment #5A to be reviewed with Assignment #5.

1) (15 points each) There are six possible pairs of rows in the table to the right. However, each part has only one pair which will work for it. (A different pair for each part of the question.) For each part, tell me which pair of rows can be used for that calculation. Explain how you reached that conclusion. Calculate that elasticity showing all work. What does that number tell us? Explain your logic.

Income	P <sub>apples</sub>	P <sub>grapes</sub>	Q <sub>apples</sub>
\$1000	\$2/lb	\$3/lb	8 lbs
\$2000	\$4/lb	\$3/lb	8 lbs
\$1000	\$4/lb	\$3/lb	6 lbs
\$1000	\$2/lb	\$1/lb	12 lbs

- A) Cross-price elasticity using the arc elasticity formula.
- B) Income elasticity using the point formula.
- C) Own-price elasticity using the point formula.

2) (15 points) Use the equation for MR given at the top of this page to prove a firm will not produce where the demand is inelastic. What is the economic reason the firms won't produce there? Hint: What should the firm do with their price if the demand is inelastic?

3) (10 points each) For each of the following, give me a number you think would make sense for that elasticity. Explain how you reached that conclusion.

- A) Cross-price elasticity of demand for peanut butter and jelly.
- B) Cross-price elasticity of small cars and gasoline.
- C) Income elasticity of hamburgers.
- D) Income elasticity of a used car.