Wilfrid W. Csaplar Jr.   Intermediate Microeconomics   Review Sheet for Exam 1

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, probably Tuesday 9/13 in the normal room.

Chapter 1: What are **trade-offs a.k.a. opportunity costs, markets**, **theories and models**, **perfect competition**, **market price**, **non-competitive markets**, **extent of a market**, **real prices a.k.a. relative prices**, and **nominal prices**?

Chapter 2: Know what moves the **supply** and **demand curves**. *Hint: refer back to something on the lists we had. For supply, MC is the big determinant.* Be able to prove that the **equilibrium** is stable. Be able to calculate the **own-price elasticity of demand**, **income elasticity of demand, cross-price elasticity of demand**, and **elasticity of supply** using both the **arc and point formulas**. Understand what the number means, how to use the number and what properties the product has. What do **perfectly elastic** and **perfectly inelastic** demand and supply curves look like? What types of goods have elastic demand, etc.? What happens to the elasticities over time? What do **price ceilings** and **floors** do to the diagram and what problems do they cause?

$$E_? = \frac{\% \; \Delta Q}{\% \; \Delta ?}$$

Chapter 3: We will only cover up to Page 98. What does it mean that **utility functions** have **completeness, transitivity, more is better than less (non-satiation)**, and **diminishing marginal utility**? Why can't they cross? Be able to prove that the slope of an **indifference curve** is the negative of the **MRS**. *Hint on virtually all slopes in the course, initially, they look upside-down. For example the slope of the indifference curve = $-MU_X/MU_Y$ = slope of the budget constraint = $-P_X/P_Y$.* Why do **perfect substitutes** and **perfect complements** have indifference curves with the shapes we drew? What is meant by **cardinal** and **ordinal utility functions**? Be able to draw the **budget constraint** and move it when a price or income changes. What is its slope? Why does the MRS = the price ratio for most indifference curve and budget constraint diagrams? When do we get **corner solutions**? Be able to find the **revealed preference** from knowing which points are chosen on the budget constraints. Explain why the **equi-marginal principle** holds. Even though we will have started using Lagrangians, it will not be on the exam.

Non-graded Homework Assignment #3A to be reviewed with Assignment #3.

1) (20 points) Use a graph to prove that a person is best off when MRS = P_X/P_Y.

2) (25 points) Suppose that a person has $10,000 which they can spend. They are also eligible for $3000 of food stamps. Food stamps are "money" which can only be used on food. Draw the budget constraint they are facing. Explain why it takes that strange shape. Draw an indifference curve which has the person worse off with the food stamps than if they were given $3000 cash. Explain how your graph shows that they would be better off with the cash than the food stamps.

3) (20 points) Draw a budget constraint/indifference curve diagram for a person who buys only milk and bananas. (That is a weird diet.) The person has an income of $120. The price of a gallon of milk is $20/gallon and the price of bananas is $5/bunch. Illustrate an increase in the price of bananas to $10/bunch. Explain why the curve(s) moved as drawn. Given your diagram, are milk and bananas substitutes or complements? Explain your logic and make sure you tell me how much of each good they buy before and after the price change.

4) (20 points) Draw a budget constraint/indifference curve diagram for hats and vests. Illustrate a decrease in income. Draw the diagram so that vests are an inferior good. Explain why the curve(s) moved as drawn. Explain how your graph shows that vests are inferior goods.

5) (15 points) For the diagram below, Point A is at the intersection of BC_0 and BC_1. If the consumer is facing budget constraint BC_1, then they choose Point A. Point B is on BC_0 and Point C is on BC_1. Given that information, rank the three points from the one they like most to the one they like least. Explain how you determined the ranking.