

## Assignment #5

Economics 101 – Section 5

Due Date: Friday Feb 27, 2004 by noon

Instructions: Complete all questions and sub questions on separate sheets of paper. Make sure to include your name (first and last) and your student number on the first page of your assignment. Staple all sheets together and turn in to my office by the due date.

1. Three people have the following individual demand schedules for Count Chocula cereal that describes how many boxes each would purchase monthly at different prices.

Price	Person 1	Person 2	Person 3
\$ 5.00	0	1	2
\$ 4.50	0	2	3
\$ 4.00	0	3	4
\$ 3.50	1	3	5

- What is the market demand schedule for this cereal assuming that these are the only buyers in the market? Using the demand schedule you just created, draw the market demand curve.
- Why would you think these three individuals have different demand schedules?

2. What would happen to the market demand curve for polyester suits if consumers' incomes go up? Use a supply and demand graph to show what happens to the price and quantity after incomes have risen.

3. Evaluate the following statement:

“If as good is inferior, a rise in its price will cause people to buy more of it, and this will violate the law of demand.” Is this statement true or false and explain why.

4. The Smiths are a low-income family with \$10,000 available annually to spend on food and shelter. Food costs \$2 per unit, and shelter costs \$1 per square foot per year. The Smiths are currently dividing the \$10,000 equally between food and shelter.

- Draw their budget constraint on a diagram with food on the vertical axis and shelter on the horizontal axis. Label their current consumption choice. How much do they spend on food? How much do they spend on shelter?
- Suppose the price of shelter rises to \$2 per square foot. Draw the new budget line. Can the Smiths continue to consume the same amounts of food and shelter as previously?
- In response to the increased price of shelter, the government makes available a special income supplement. The Smiths receive a cash grant of \$5,000 that must

be spent on food and shelter. Draw their new budget line and compare it to the line you derived in part a. If they wanted, is it possible for the Smiths to consume the same combination of food and shelter as in part a?

- d. With the cash grant and the shelter priced at \$2 per square foot, does it make any sense the family would consume the same combination as in part a? Why or why not.

5. The following table shows total output (in the number of tax returns completed per day) of an accounting firm:

<u>Number of Accountants</u>	<u>Number of Returns per day</u>
0	0
1	5
2	12
3	17
4	20
5	22

Assume the quantity of capital remains constant (here capital would be the office building, computers, etc) at all levels of output.

- Calculate the marginal product of each accountant.
- Over what range of employment do you see increasing returns to labor?
- Explain why the MPL (marginal product of labor) might behave for an accounting firm. Give an intuitive explanation.