

Economics 2010

Practice Assignment #3

SECTION I.

1. What is the connection between elasticity and total revenue?
2. Explain why the short-run demand curve is usually less elastic than the long-run demand curve?
3. Which item in each pair has the larger elasticity of demand? Why?
 - a. Sports Illustrated or a magazine
 - b. Vacations or vacations in Cancun
 - c. Broccoli or vegetables
 - d. An IUPUI education or a college education
4. Define income elasticity of demand and cross-elasticity of demand.
5. What are the differences between momentary, short-run, and long-run supply? Which is the most elastic? The least elastic?

SECTION II.

1. (2 points) The price elasticity of brussels sprouts is estimated to be 0.5. Government authorities want to increase brussels sprouts consumption by 15 percent. By what percentage must the price to consumers fall to achieve this objective? What will happen to total consumer expenditure on brussels sprouts as a result of the price cut?
2. (2 points) The price of a package of Reese's Peanut Butter Cups rises from \$1.00 to \$1.25. As a result, the weekly quantity of Reese's demanded falls from 10,000 to 9,000 packages. Calculate the price elasticity of demand using the average of the initial and new prices and quantities as the basis for figuring the percentage changes.
3. (2 points) The price elasticity of demand from cigarettes is 1.2. The price elasticity of supply for cigarettes is estimated to be 1. Will a 15-cent per pack tax of cigarettes increase the price of cigarettes by 15 cents per pack?
4. (4 points) Imagine that the short-run price elasticity of supply for a farmer's corn is 0.3, while the long-run price elasticity of supply is 2. If prices for corn fall 30%, what are the short-run and long-run changes in quantity supplied? What are the short-run and long-run changes in quantity supplied if prices rise by 15%? What happens to the farmer's revenues in each of these 4 situations?
5. (6 points) Suppose that you have been hired as an economic consultant by OPEC and given the following schedule showing the world demand for oil:

<u>Price (\$/barrel)</u>	<u>Quantity Demanded (millions of barrels/day)</u>
10	60
20	50
30	40
40	30
50	20

Your advice is needed on the following questions:

- a. If the price rises from \$20 to \$30 a barrel, will the total revenue from oil sales increase or decrease?

- b. What will happen to total revenue if the supply of oil is decreased further and the price rises to \$40 a barrel?
 - c. What is the price that will achieve the highest total revenue?
 - d. What quantity of oil will be sold at the answer to (c)?
 - e. What are the values of the price elasticity of demand for price changes of \$10 a barrel at average prices of \$15 and \$45?
 - f. What is the elasticity of demand that maximizes total revenue?
 - g. Over what range of prices is the demand for oil inelastic?
6. (4 points) Transportation economists generally agree that the cross-price elasticity of demand for automobile use with respect to the price of bus fares is about zero. Explain what this number means? Do you agree? Why or why not?