B.E. International Program

Faculty of Economics, Thammasat University

EE 211 PRINCIPLES OF MICROECONOMICS
SEMESTER 1/2011
PROBLEM SET 2

1. Nile.com, the online bookseller, wants to increase its total revenue. One strategy is to offer a 10% discount on every book it sells. Nile.com knows that its customers can be divided into two distinct groups according to their likely responses to the discount.
The accompanying table shows how the two groups respond to the discount.

	Group A (sales per week)	Group B (sales per week)
Volume of sales before the 10% discount	1.55 million	1.50 million
Volume of sales after the 10% discount	1.65 million	1.70 million

a. Using the midpoint method, calculate the price elasticities of demand for group A and group B.

b. Explain how the discount will affect total revenue from each group.

c. Suppose Nile.com knows which group each customer belongs to when he or she logs on and can choose whether or not to offer the 10% discount. If Nile.com wants to increase its total revenue, should discounts be offered to group A or to group B, to neither group, or to both groups?

2. Answer the following questions.

a. Why might dentures have a negative income elasticity of demand?

b. What effect did the development of Lasik surgery to correct myopia have on the price elasticity of demand and the income elasticity of demand for prescription eyeglasses?

3. The accompanying table lists the cross-price elasticities of demand for several goods, where the percent quantity change is measured for the first good of the pair, and the percent price change is measured for the second good.

Good	Cross-price elasticities of demand
Air-conditioning units and kilowatts of electricity	−0.34
Coke and Pepsi	+0.63
High-fuel-consuming sport-utility vehicles (SUVs) and gasoline	−0.28
McDonald's burgers and Burger King burgers	+0.82
Butter and margarine	+1.54

a. Explain the sign of each of the cross-price elasticities. What does it imply about the relationship between the two goods in question?

b. Compare the absolute values of the cross-price elasticities and explain their magnitudes. For example, why is the cross-price elasticity of McDonald's burgers and Burger King burgers less than the cross-price elasticity of butter and margarine?

c. Use the information in the table to calculate how a 5% increase in the price of Pepsi affects the quantity of Coke demanded.

d. Use the information in the table to calculate how a 10% decrease in the price of gasoline affects the quantity of SUVs demanded.

Part II. Review Question on concept about elasticity and price control

1. Establishing a price floor above the equilibrium price will cause:

- a. excess demand or shortage.
- b. excess supply or surplus.
- c. a black market to develop.
- d. the price of the good to fall.

2. The price elasticity of demand is calculated as the:

- a. absolute change in quantity demanded divided by the absolute change in price.
- b. percentage change in price divided by the percentage change in quantity demanded.
- c. percentage change in demand divided by the percentage change in price.
- d. percentage change in quantity demanded divided by the percentage change in price.

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3. Income elasticity of demand measures:

- a. the responsiveness of price to changes in income.
- b. the responsiveness of quantity demanded to changes in income.
- c. the responsiveness of sellers to changes in buyers' incomes.
- d. the responsiveness of markets to changes in buyers' income.

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4. Cross-price elasticity of demand is used to determine if a good is:

- a. normal.
- b. price elastic.
- c. inferior.
- d. a substitute or complement to another good.

"Just as eating against one's will is injurious to the health, so study without a liking for it spoils the memory, and it retains nothing it takes in."

Leonardo Da Vinci