INTRODUCTION TO ECONOMICS

BUSINESS ADMINISTRATION DEGREE - YEAR 2016

PRACTICE SHEET 4

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

   (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. U.S. winter wheat production increased dramatically in 1999 after a bumper harvest. The supply curve shifted rightward; as a result, the price decreased and the quantity demanded increased (a movement along the demand curve). The accompanying table describes what happened to prices and the quantity of wheat demanded.

	1998	1999
Quantity demanded (bushels)	1.74 billion	1.9 billion
Average price (per bushel)	$3.70	$2.72

   (a) Using the midpoint method, calculate the price elasticity of demand for winter wheat.

   (b) What is the total revenue for U.S. wheat farmers in 1998 and 1999?

   (c) Did the bumper harvest increase or decrease the total revenue of American wheat farmers? How could you have predicted this from your answer to part (a)?

3. What is the price elasticity of the demand if when the price of a product falls 2%, the quantity demanded rises 1%?

4. What is the price elasticity of the demand for the following demand curves when the price is 25?

(a) $X^D = 150?2P_X$.

(b) $P_X = 100 - X^D$.

5. Suppose a good X with the demand $X^D = 50 - 2P_X$. What price maximizes sellers total revenue?