ECON 103, Spring 2009

Simon Fraser University

Assignment 1
Answer Key

Problem 1 *(5 marks)*

(a) maximum amount a consumer is willing to pay for fixed quantity is TV=26.

(b) CS at price of 80 cents is 10 dollars. CS at price of 60 cents is 14.4. Maximum membership fee will leave the consumer indifferent between shopping at these prices; max. membership is 4.4.

Problem 2 *(5 marks)*
CALCULATIONS (1 point)
When quantity is equal to 1, 2, 2.5, 3, 4
price is equal to 8, 6, 5, 4, 2
total revenue is 8, 12, 12.5, 12, 8.
Elasticity= $-.5\frac{P}{Q}$= -4, -3/2, -1, -2/3, -.25.
EXPLANATION (4 points)
The question directly asks ***how*** and ***under what circumstances*** increasing price will lower TR:
increasing price will always lower the quantity sold (by the law of demand). As a result total revenue might increase or decrease depending on how sensitive quantity demanded is to price changes. ***If demand is elastic - the quantity demanded is price sensitive and small increase in price will result in large decrease in quantity sold (percentage decrease in Q is larger than percentage increase in P), the total revenue will fall***. This is what was required for full marks.

Problem 3 *(5 marks)* $Q_1^0 = 30$

(a) $P_2^0 = 1$, $P_2' = 1.25$ $Q_1' = 39$. $\Delta P_2 = .25$, $\Delta Q_1 = 9$. Using the initial price and quantity: $E12 = \frac{9}{.25} \cdot \frac{2}{30} = 1.2$. ***Substitutes.***
Using average price and quantity is okay as long as the formula is provided.

(b) $M_0 = 25,000$ $M' = 30,000$, $Q_1' = 36$. $E_M = \frac{6}{5,000} \cdot \frac{25,000}{30} = 1$. ***Normal good.***