

FORMAT: All assignments must follow the format as noted:

All assignments should include the following:

- Title page with the assignment number and your name
  - Questions placed in the correct order
  - Show your work on the assignment and not just a single answer.
  - Paper size of 8 X 11, stapled (I don't carry a stapler)
  - Neatly written or typed. Messy assignments will not be accepted.
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### QUESTION 1

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Suppose that the market supply for frozen yogurt in Smallville is given by  $Q_s = 2+P$ . The market demand is for frozen yogurt is given by  $P = 25 - 1.5Q$ .

- a. Find the equilibrium price and quantity
- b. Graph the curves and label correct intercepts, slopes, and equilibrium values.
- c. Given a price of \$12 is being regulated by the government, what  $Q_d$  and  $Q_s$  will occur in the market? Calculate the values and show on a graph.
- d. What elements could cause the demand curve to shift? Be specific your answer – provide examples that are relevant to the question.

### QUESTION 2

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In Country Faraway, cigarettes are forbidden, so people trade cigarettes in a black market. The cigarette demand is  $Q_d = 12 - P$ , and the cigarette supply is  $Q_s = 2P$ .

- a. Find the equilibrium price and quantity in the black market.
- b. The government becomes aware of the black market and reinforces the police so that half of the cigarette supply would be seized and destroyed. Under this circumstance, what are the demand and supply functions? What is the new equilibrium price and quantity? Show the change by using a supply and demand diagram.
- c. How does the consumer surplus change between (a) and (b)?
- d. Using a well labelled graph show the consumer surplus using the equations from part b.

### QUESTION

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For each of the following scenarios, use a supply and demand diagram to illustrate the effect of the given shock on the equilibrium price and quantity in the specified competitive market. Explain whether there is a shift in the demand curve, the supply curve, or neither.

- a. An unexpected temporary heat wave hits the East Coast. Show the effect in the ice cream market in New England.
- b. Milk Prices increase dramatically in the ice cream market in New England.
- c. China and Mexico are major producers of textiles. Workers in Mexico decide to go on strike. Show the effect on the market for Mexican textiles.
- d. Show the effect of the situation described in part c above on the market for Chinese textiles.

### QUESTION

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- a. Originally the price of a product was \$6.00. Total sales (total consumer expenditures) for this product were \$600,000 per month. Due to a shift in supply, the price increased to \$6.06. Total monthly sales in the market then fell to \$594,000. What is the elasticity of demand for this product?
- b. Suppose that when the price of gasoline increases from \$0.48 to \$0.52 per litre, gasoline consumption falls from 10.1 million litres per year to 9.9 million litres in a particular town. Compute the arc elasticity of demand for gasoline.
- c. If the income elasticity of demand for a commodity is 0.5, is the commodity an inferior good? Exactly what does an income elasticity of 0.5 mean?

**QUESTION**

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- Consider commodity Z which has an income elasticity of -2.5. What type of good is good Z? What is the percentage change in quantity demanded of good Z when income increases by 10%?
- The cross-price elasticity of demand for good A given a change in price of good B is +0.25. What is A's relationship to B? What is the percentage change in the quantity demanded of good A if the price of good B falls \$1 to \$9?
- The income elasticities of demand for movies, dental services, and clothing have been estimated to be +3.4, +1.0, and +0.5 respectively. Interpret these coefficients. What does it mean if the income elasticity coefficient is negative?

**QUESTION**

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- Describe the three types of elasticity of demand and give one example of each of these types.
- Discuss how elasticity can be used in managerial decision making

**QUESTION**

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$$Q_D = 8 - P$$

$$Q_S = \frac{1}{2} P - 1$$

- Calculate the equilibrium price and quantity.
- Please graph this problem labeling all lines, axes, and the equilibrium, price, slope, intercept and quantity
- The government institutes a price support program where the support price is \$4. Calculate the resulting shortage or a surplus value and then show this on the same graph in part b.
- The government institutes a price support program where the support price is \$10. Calculate the resulting shortage or a surplus value and then show this on the same graph in part b.

**QUESTION**

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Provide a value and explanation for each of the following. Be sure to note if these products are complements, substitutes or unrelated in your explanation.

- An increase in the price of chicken from \$1.50 to \$2.10 per pound increased the average packages of turkey demanded per week from 300 to 360. Assuming that all other economic variables were held constant, the cross-price elasticity of demand between chicken and turkey is \_\_\_\_\_ which indicates that the two goods are \_\_\_\_\_/
- A café observed an increase in the demand for its milk following a rise in the price of a cup of iced tea from \$1.20 to \$1.50. Assuming the cross-price elasticity of demand for milk with respect to a change in the price of iced tea is +0.8, by how much (in per cent) will the demand for milk have increased?
- The price of good X falls by 15%. As a result, the demand for a substitute good Y rises by 30%. What is the cross-elasticity of demand for good Y with respect to good X?
- If the cross-price elasticity of demand for samosas and sushi is 0.6 and presently 1000 units of samosa are consumed, how many units of samosas will be consumed if the price of sushi increases by 10%?

**QUESTION**

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Oatmeal is an inferior good and cold cereal is a substitute for oatmeal. The cross-price elasticity of Raisin with respect to oatmeal is negative.

Using a well-labeled graph show the effect on the oatmeal market for each of the following. (Please also provide a brief explanation of the relationship (e.g., positive/negative) and the reasons/logic for the relationship.

- An increase in the price of raisins.
- An increase in income.
- A decrease in population size.
- An increase in the price of cold cereal