

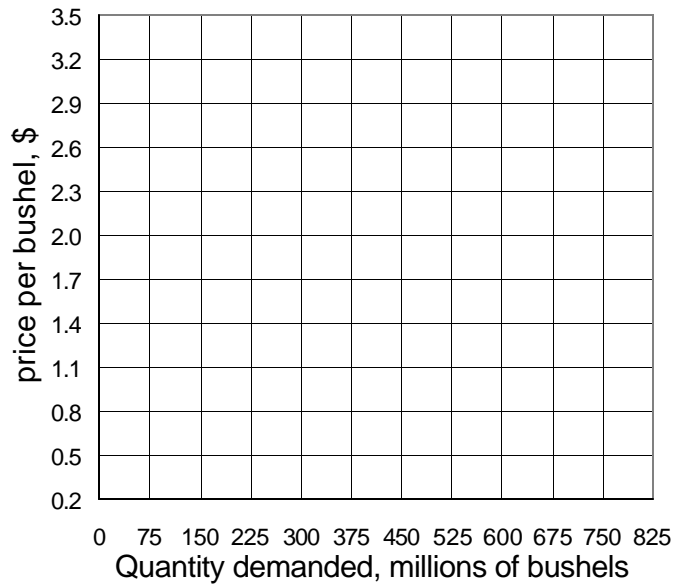
ECON 151 – Fall 2007
Problem Set 3
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- 1) As an economist you have been hired by ConAgra to investigate the relationship between the market demand for its corn (in bushels, bu.) and the total revenue of the company. You have data for the quantity of corn demanded at different prices.
- a) Use that data and fill in the Total Revenue, the Elasticity of Demand I (using the arc formula) and the Elasticity of Demand II (using the point formula) columns in the table below.

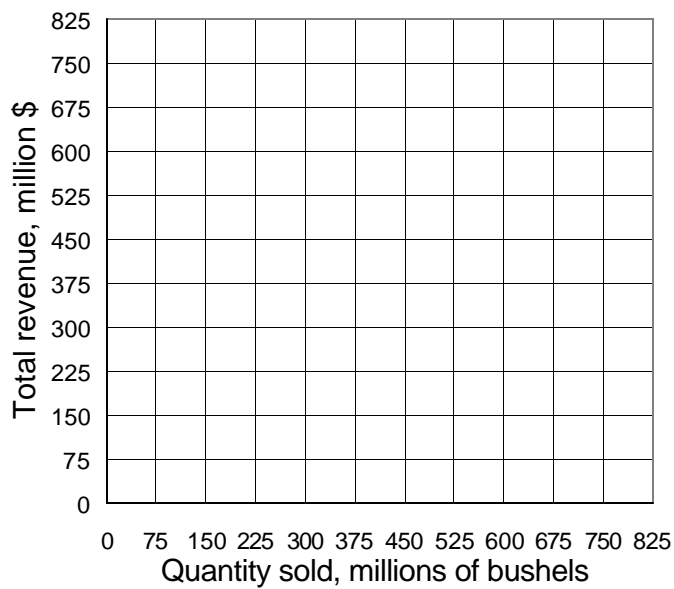
Price per bu., \$	Q demanded (million bu.)	Total Revenue (million dollars)	Elasticity of Demand (arc formula)	Elasticity of Demand (point formula)
\$3.50	0			
\$3.20	75			
\$2.90	150			
\$2.60	225			
\$2.30	300			
\$2.00	375			
\$1.70	450			
\$1.40	525			
\$1.10	600			
\$0.80	675			
\$0.50	750			
\$0.20	825			

Table 1

- b) Plot the demand curve for the corn of ConAgra in Graph 1 and the total revenue curve in Graph 2 on the following page.
- Highlight with blue the elastic section of the Demand Curve and the corresponding section of the Total Revenue Curve.
 - Highlight with red the unitary elastic section of the Demand Curve and the corresponding section of the Total Revenue Curve.
 - Highlight with green the inelastic section of the Demand Curve and the corresponding section of the Total Revenue Curve.



Graph 1



Graph 2

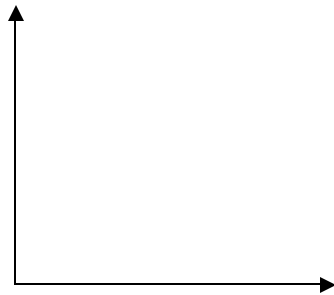
c) Complete the following summary table:

If Demand is	The Elasticity Coefficient is	If price rises, total revenue will	If price falls, total revenue will
Elastic	_____	_____	_____
Unit Elastic	_____	_____	_____
Inelastic	_____	_____	_____

2. Draw a supply and demand graph that reflects the following statements about the market for a particular good. Based on the information in the statements, you should shift either the demand or the supply curve, showing that on the graph. Then you should make a statement about the elasticity of **the other curve** (the curve that does not shift), which fits the indicated result. Label the graph carefully including the axes.

- i. A decrease in the supply for good A will not change the equilibrium quantity.

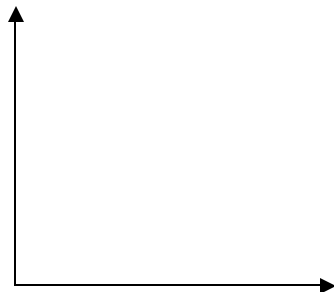
Market for good A



Your statement:

- ii. An increase in the supply for good C causes a decrease in the total revenue from its sales.

Market for good C



Your statement:

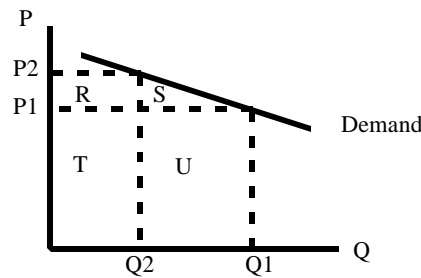
3. Fill in the blanks:

a) Suppose the price elasticity coefficients of demand are 0.43, 1.23, 1.62, and 0.15 for products W, X, Y, and Z respectively. A 1 percent decrease in price will result in an increase in total revenue in the case (s) of product (s) _____.

b) The cross price elasticity of demand measures how sensitive purchases of a given product are to changes in _____.

c) If a demand for a product is said to be “inelastic”, the value of the price elasticity of demand coefficient is _____.

4. Answer the next four questions on the basis of the following diagram.



a) What is the total revenue at P1 in terms of the area(s) R, S, T, U and Why?

b) What is the total revenue if the price rises to P2? That is, which area in the diagram.

c) What can we conclude about total revenue as a result of the rise in the price from P1 to P2 in terms of the changes in the areas? Explain.

d) What can we say about the price elasticity of demand in the P1 to P2 range and why?