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## ELASTICITY OF DEMAND AND SUPPLY

1 (*Calculating Price Elasticity of Demand*) Suppose that 50 units of a good are demanded at a price of \$1 per unit. A reduction in price to \$0.20 results in an increase in quantity demanded to 70 units. Show that these data yield a price elasticity of 0.25. By what percentage would a 10 percent rise in the price reduce the quantity demanded, assuming price elasticity remains constant along the demand curve?

2 (*Price Elasticity and Total Revenue*) Fill in the blanks for each price-quantity combination listed in the following table. What relationship have you depicted?

<u>P</u>	<u>Q</u>	<u>Price Elasticity</u>	<u>Total Revenue</u>
\$9	1		
\$8	2	_____	_____
\$7	3	_____	_____
\$6	4	_____	_____
\$5	5	_____	_____
\$4	6	_____	_____
\$3	7	_____	_____
\$2	8	_____	_____

3 (*Categories of Price Elasticity of Demand*) For each of the following absolute values of price elasticity of demand, indicate whether demand is elastic, inelastic, perfectly elastic, perfectly inelastic, or unit elastic. In addition, determine what would happen to total revenue if a firm raised its price in each elasticity range identified.

- a.  $E_D = 2.5$
- b.  $E_D = 1.0$
- c.  $E_D = 0.25$
- d.  $E_D = 0.8$

4 (*Determinants of Price Elasticity*) Why is the price elasticity of demand for Coca-Cola greater than price elasticity of demand for soft drinks generally?

5 (*Determinants of Price Elasticity*) Would the price elasticity of demand for electricity be more elastic over a shorter or a longer period of time?

6 (*Price Elasticity of Supply*) Calculate the price elasticity of supply for each of the following combinations of price and quantity supplied. In each case, determine whether supply is elastic, inelastic, perfectly elastic, perfectly inelastic, or unit elastic in each case.

- a. Price falls from \$2.25 to \$1.75; quantity supplied falls from 600 units to 400 units.
- b. Price falls from \$2.25 to \$1.75; quantity supplied falls from 600 units to 500 units.
- c. Price falls from \$2.25 to \$1.75; quantity supplied remains at 600 units.
- d. Price increases from \$1.75 to \$2.25; quantity supplied increases from 466.67 units to 600 units.