

## Price Reductions and Corresponding Increases in Quantity Demanded for Three Products

Commodity	Reduction in Price	Increase in Quantity Demanded (per month)
Cheese	\$2 per pound	7,500 pounds
T-shirts	\$2 per shirt	25,000 shirts
CD players	\$2 per CD player	500 CD players

Product	Unit	Original Price (\$)	New Price (\$)	Average Price(\$)	Original Quantity	New Quantity	Average Quantity
Cheese	Pound	5	3	4	116,250	123,750	120,000
T-shirts	Shirt	17	15	16	187,500	212,500	200,000
CD players	Player	81	79	80	9750	10,250	10,000

# Calculation of Demand Elasticities

Product	Percentage decrease in price	Percentage increase in quantity	Elasticity of Demand
Cheese	50	6.25	0.125
T-shirts	12.5	12.5	1
CD players	2.5	5	2

# Price Elasticity of Demand and Total Revenue

	Price of crossing = \$0.90	Price of crossing = \$1.10
<b>Unit elasticity demand</b>		
Quantity demanded	1,100	900
Total Revenue	\$990	\$990
<b>Inelastic demand</b>		
Quantity demanded	1,050	950
Total Revenue	\$945	\$1,045
<b>Elastic demand</b>		
Quantity demanded	1,200	800
Total Revenue	\$1,080	\$880

For each case, choose the condition that characterizes demand: elastic demand, inelastic demand, or unit-elastic demand

- Total revenue decreases when price increases.
- The additional revenue generated by an increase in quantity sold is exactly offset by revenue lost from the fall in price received per unit.

For the following goods, what is the elasticity of demand? Explain. What shape of the demand curve?

- Demand by a snake-bite victim for an antidote.
- Demand by students for green erasers.

# The income elasticity of demand

- After Chelsea's income increased from \$12,000 to \$18,000 a year, her purchases of CDs increased from 10 to 40 CDs a year. Calculate Chelsea's income elasticity of demand for CDs using the midpoint method.

# The Cross-Price Elasticity of Demand

- As the price of margarine rises by 20% , a manufacturer of baked goods increases its quantity of butter demanded by 5%. Calculate the cross-price elasticity of demand between butter and margarine. Are butter and margarine substitutes or complements for this manufacturer?

# The price elasticity of supply

Using the midpoint method, calculate the price elasticity of supply for web-design services when the price per hour rises from \$100 to \$150 and the number of hours transacted increases from 300,000 hours to 500,000. Is supply elastic, inelastic, or unit-elastic?

True or false? Long-run price elasticities of supply are generally larger than short-run price elasticities of supply. As a result, the short-run supply curves are generally flatter than the long-run supply curves.

True or false? When supply is perfectly elastic, changes in demand have no effect on price.