Supply and Demand

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Key Terms

- **complementary good-**good whose use is associated with another good such that demand for one generates demand for the other (Hot Dogs and Hot Dog Buns)
- **Demand** refers to how much (quantity) of a product or service is desired by buyers
- **Supply-** Supply is the amount of a good or service available at any particular PRICE
- **Equilibrium-** When SUPPLY and DEMAND are in balance. The quantity that buyers are willing to buy exactly matches the quantity that sellers are willing to sell.

- **Normal goods-** When average INCOME increases, the DEMAND for normal goods increases, too. The opposite of INFERIOR GOODS
- **Inferior goods-** Products that are less in demand as consumers get richer. For NORMAL GOODS, DEMAND increases as consumers have more to spend.
- **Law of Demand-** consumers buy more of a good when its price decreases and less when its price increases
- **Law of Supply-** At higher prices more of a good will be supplied, and at lower prices, less of a good will be supplied

- **Market-** Abstract concept referring to all the arrangements individuals have for exchanging with one another
- **Market Demand-** demand of all consumers in the marketplace for a particular good or service
- **Relative Price-** Number of units of one commodity that must be sacrificed to purchase one unit of another commodity
- **Shortage-** Situation where the quantity available in a market falls short of the quantity demanded at a given time or price
- **Subsidy-** MONEY paid, usually by GOVERNMENT, to keep PRICES below what they would be in a free market

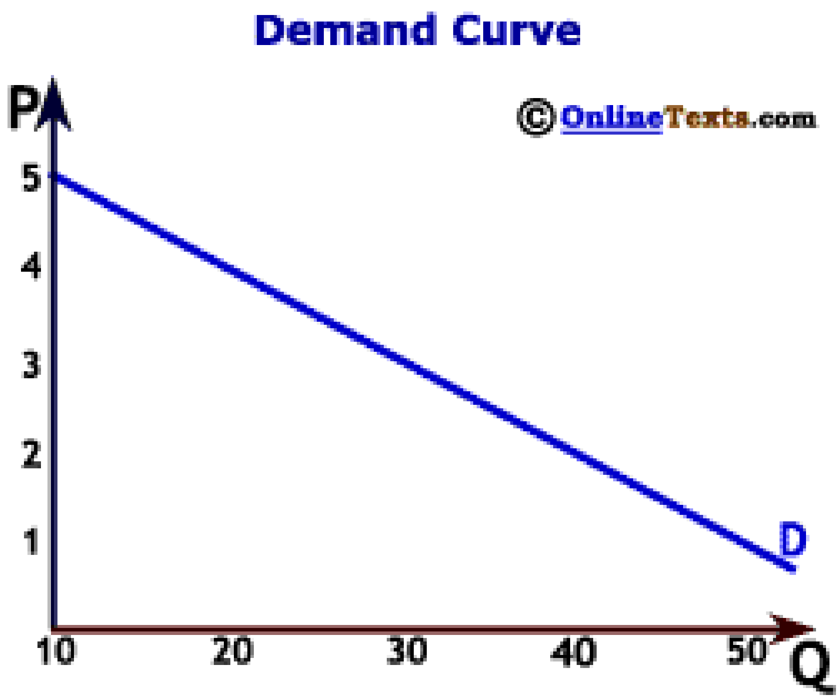
- **Substitute goods-** Goods for which an increase in DEMAND for one leads to a decline in demand for the other – Coca-Cola and Pepsi
- **Surplus-** Quantity supplied is greater than quantity demanded at a price above the market clearing price.

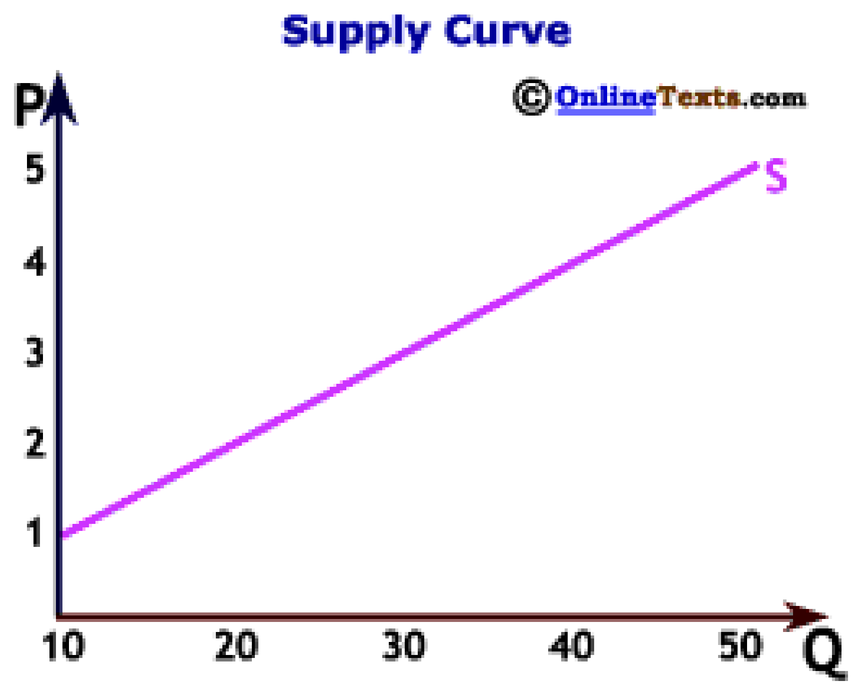
Demand Curve

graph showing the relationship between the price of a good and the amount of DEMAND for it at different PRICES.

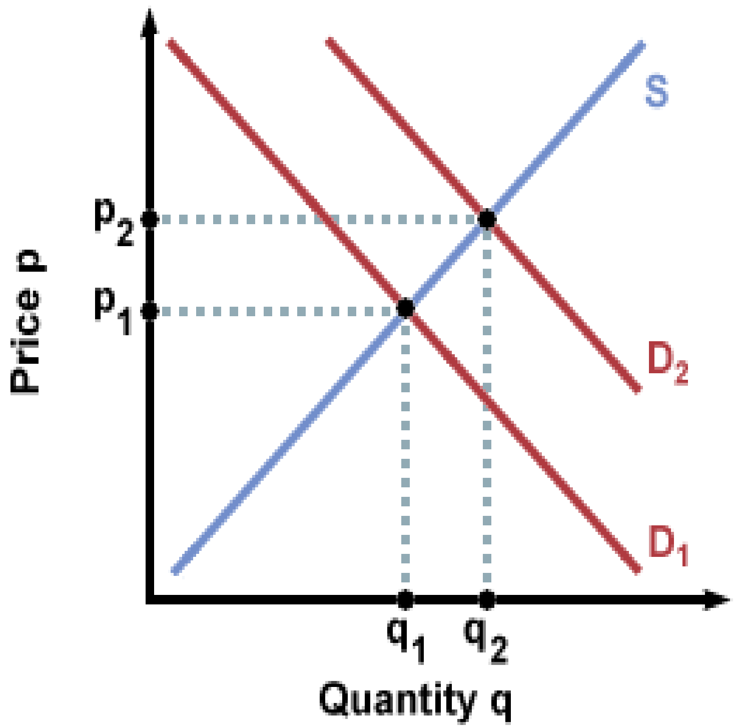
Supply Curve

A graph of the relationship between the PRICE of a good and the amount supplied at different prices

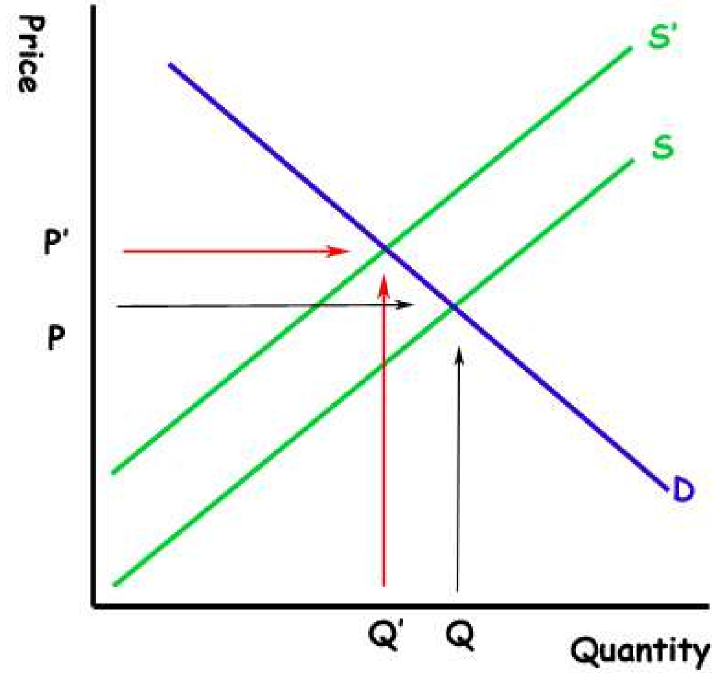




Demand Shift



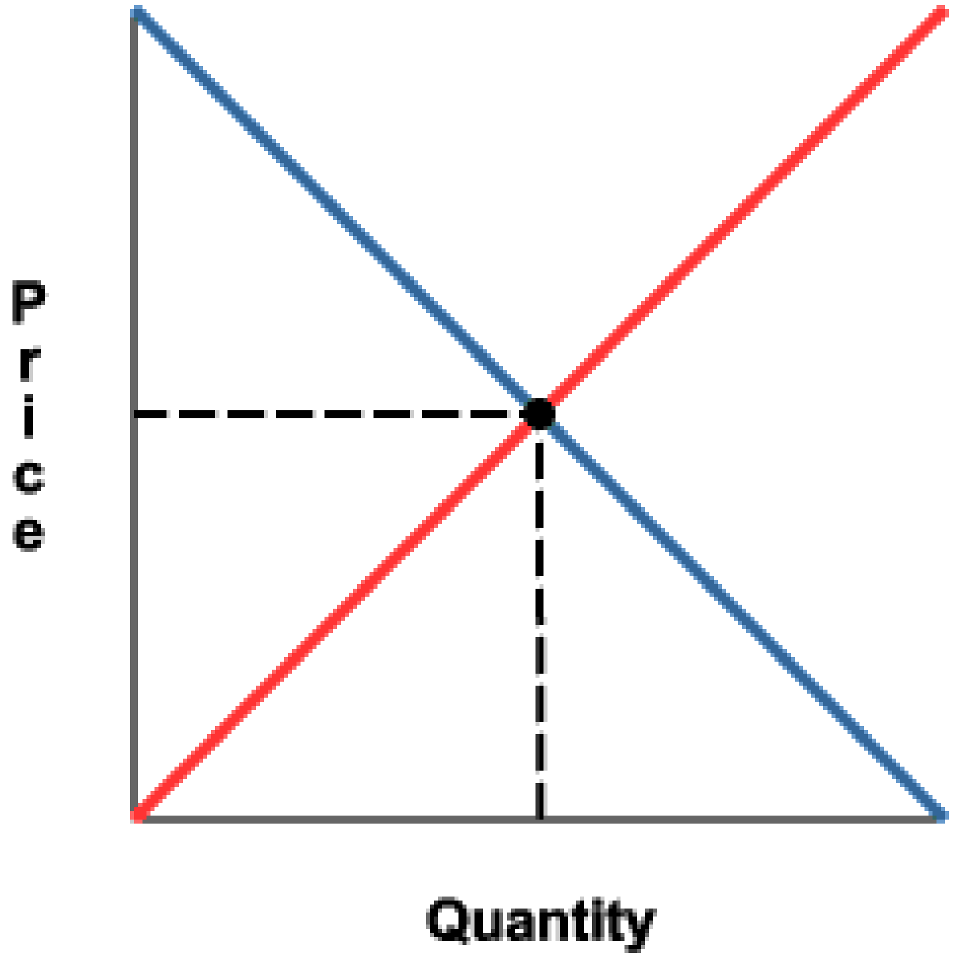
Supply Shift



When anything, other than the price, changes

Equilibrium Point

Point at which quantity demanded equals quantity supplied. AKA Markey Clearing Price. Any shift away from this point will trigger forces to shift back.



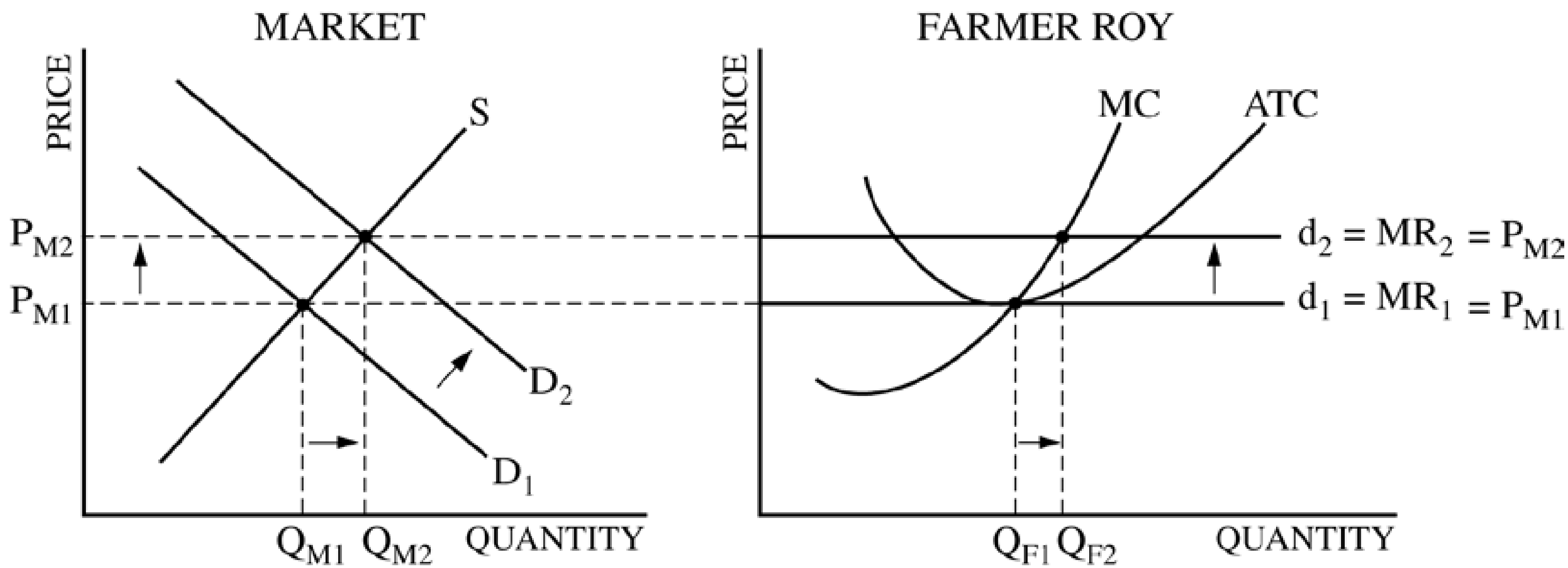
Assume that corn is produced in a perfectly competitive market. Farmer Roy is a typical producer of corn.

(a) Assume that Farmer Roy is making zero economic profit in the short run. Draw a correctly labeled side-byside graph for the corn market and for Farmer Roy and show each of the following.
(i) The equilibrium price and quantity for the corn market, labeled as PM1 and QM1, respectively
(ii) The equilibrium quantity for Farmer Roy, labeled as QF1

(b) For Farmer Roy's corn, is the demand perfectly elastic, perfectly inelastic, relatively elastic, relatively inelastic, or unit elastic? Explain.

(c) Corn can be used as an input in the production of ethanol. The demand for ethanol has significantly increased.
(i) Show on your graph in part (a) the effect of the increase in demand for ethanol on the market price and quantity of corn in the short run, labeling the new equilibrium price and quantity as PM2 and QM2, respectively.
(ii) Show on your graph in part (a) the effect of the increase in demand for ethanol on Farmer Roy's quantity of corn in the short run, labeling the quantity as QF2.
(iii) How does the average total cost for Farmer Roy at QF2 compare with PM2?

(d) Corn is also used as an input in the production of cereal. What is the effect of the increased demand for ethanol on the equilibrium price and quantity in the cereal market in the short run? Explain.



(a) One point is earned for a correctly labeled graph of the corn market (S, D, PM1, QM1).

- One point is earned for the graph of the firm with a horizontal demand curve at PM1.
- One point is earned for showing the profit-maximizing quantity, QF1, at MC = MR.
- One point is earned for showing minimum ATC on the horizontal demand curve at QF1.

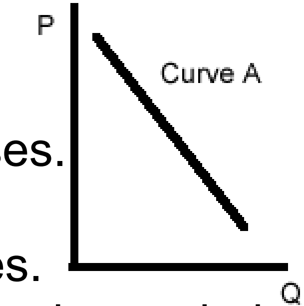
(B) One point is earned for stating that the demand curve for Farmer Roy's corn is perfectly elastic because Farmer Roy is a price taker or because he can sell all that he wants at the market price.

(C) One point is earned for shifting the market demand curve to the right and showing PM2 and QM2.

- One point is earned for shifting the firm's demand curve upward to the level of PM2.
- One point is earned for showing the profit-maximizing quantity, QF2, at MC = new MR.
- One point is earned for stating that ATC at QF2 is lower than PM2.

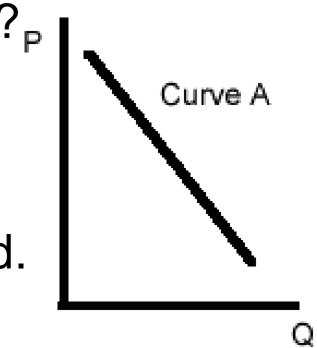
(D) One point is earned for stating that the equilibrium quantity will decrease and the equilibrium price will increase, because the increase in the price of corn causes a decrease in the supply of cereal.

1. Refer to the graph of curve A. The vertical axis represents Price and the horizontal axis represents quantity. Which of the following statements is not true about curve A?



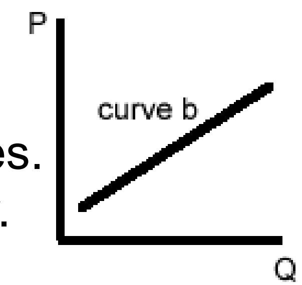
(A) Curve A can represent a demand curve.
(B) Curve A illustrates an increase in quantity as price decreases.
(C) Curve A has a positive slope.
(D) Curve A illustrates a decrease in quantity as price increases.
(E) Curve A illustrates a relationship between various quantities demanded and various prices.

2. Which of the following explains the shape of this demand curve?



(A) The income effect and the substitution effect.
(B) The costs of inputs.
(C) The slope of the supply curve.
(D) The negative correlation between price and quantity demanded.

Which one of the following statements is true?



(A) Curve b illustrates an increase in quantity supplied as price decreases.
(B) Curve b has a negative slope.
(C) Curve b is perfectly elastic.
(D) Curve b illustrates an increase in quantity supplied as price increases.
(E) Curve b does not illustrate a relationship between price and quantity.

How it relates to other units

- <u>Derived Demand-</u> demand placed on one good or service as a result of changes in the price for some other related good or service.
- <u>Scarcity-</u> situation in markets whereby either less goods are available than the demand for them, or too little money is available to their potential buyers for making the purchase.

The Real World

- http://www.nytimes.com/2007/11/04/opinion/04pollan.html
- http://www.telegraph.co.uk/finance/newsbysector/energy/oilandgas/7816593/BP-oil-spill-shares-plummet-as-US-warns-it-will-take-action-to-stop-dividend.html

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Sources

- Miller, Roger LeRoy, ed. *Economics Today*. 2001-2002 ed. Vol. 1. N.p.: Pearson Education, 2000. Print. 1 vols.
- "The Economist Gossary." *The Economist*. The Economist, n.d. Web. 20 Jan. 2011
- "Supply and Demand." *reffonomics.com*. N.p., n.d. Web. 20 Jan. 2011.