CHAPTER 3

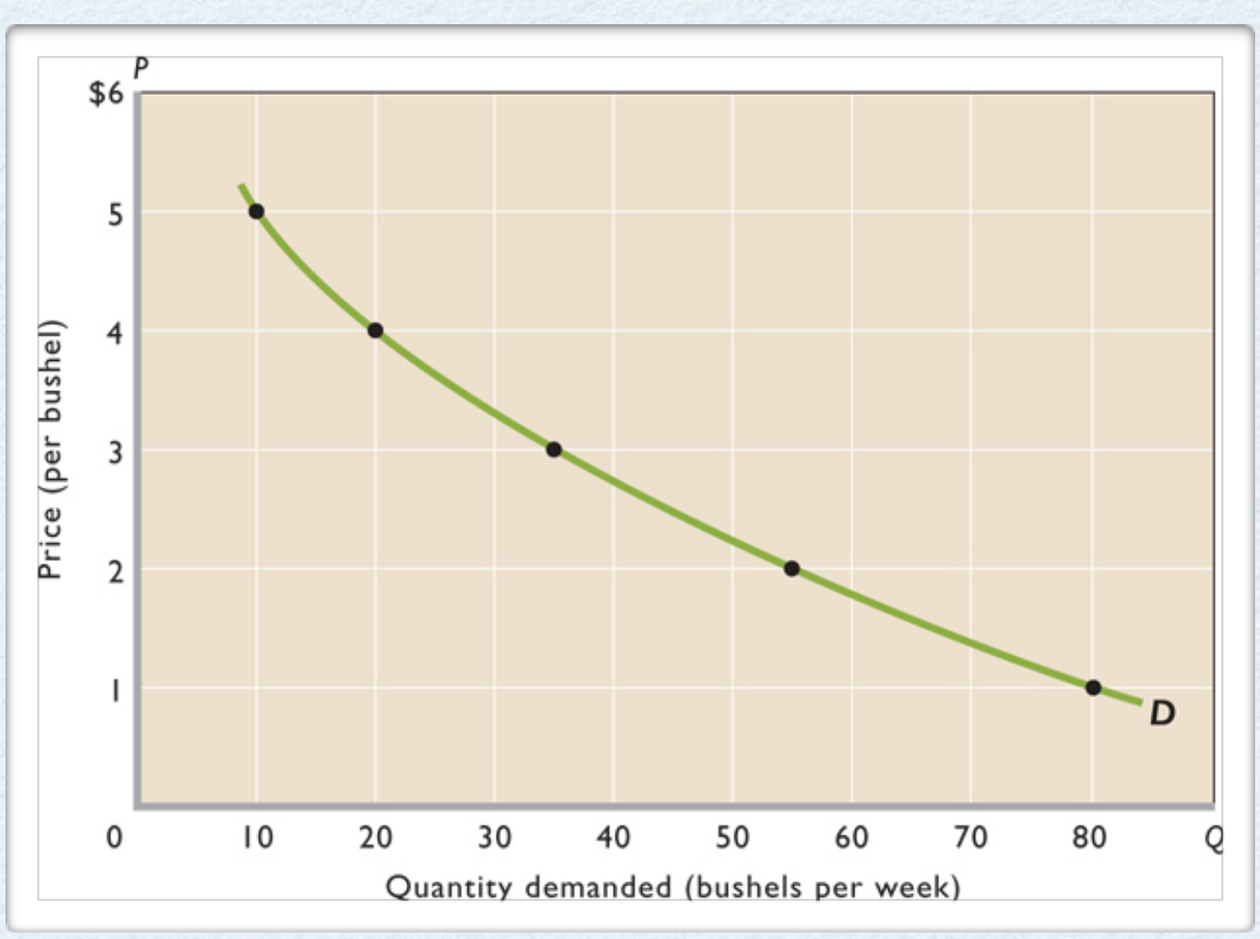
Chapter 3 - Demand, Supply, and Market Equilibrium

- **Markets** bring together buyers (demand) and sellers (supply).
  - Markets are could be local, national, international
  - Large number of buyers and sellers, selling standardized products
  - Competitive market
  - Markets involve demand, supply, price, and quantity

Demand

- **Demand** - is a schedule or a curve that shows the various amounts of a product that consumers are willing and able to purchase at each price level during a specified period of time.

Demand for Corn	
Price per Bushel	Quantity Demanded per Week
$5	10
4	20
3	35
2	55
1	80



Demand - continued

- *Other things equal*, as price falls, quantity demanded rises, and as price rises, quantity demanded falls. ➠ There is a **negative or inverse relationship between price and quantity demanded**. This inverse relationship is called the **law of demand**.

- Why is the negative relationship?

1. **Common sense**

2. **Diminishing marginal utility** (marginal = extra) ➠ P ⇓ ➠ Q_d ⇑

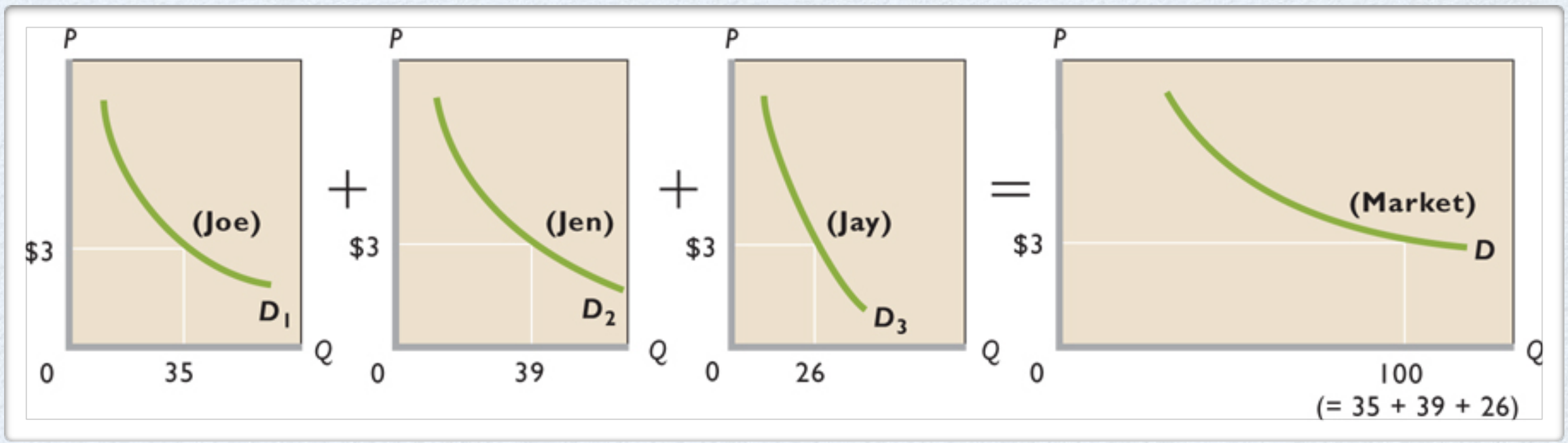
3. **Income effect** - P ⇓ ➠ Y ⇑ ➠ Q_d ⇑
   & the **substitution effect** - $P_{chicken}$ ⇓ ➠ (people will tend to substitute chicken for beef) $Q_{d\ chicken}$ ⇑
   In the substitution effect one can also see the income effect - $P_{chicken}$ ⇓ ➠ Y ⇑ ➠ $Q_{d\ chicken}$ ⇑

Demand - continued

- The inverse relationship between price and quantity demanded can be represented on a graph in which we measure *quantity demanded* on the X-axis and *price* on the y-axes. Such a graph/curve is called a **demand curve**.

- By adding the quantities demanded by all consumers at each of the various possible prices, we can get from individual demand to **market demand**.

Graphically, market demand is the horizontal summation of individual demand curves.



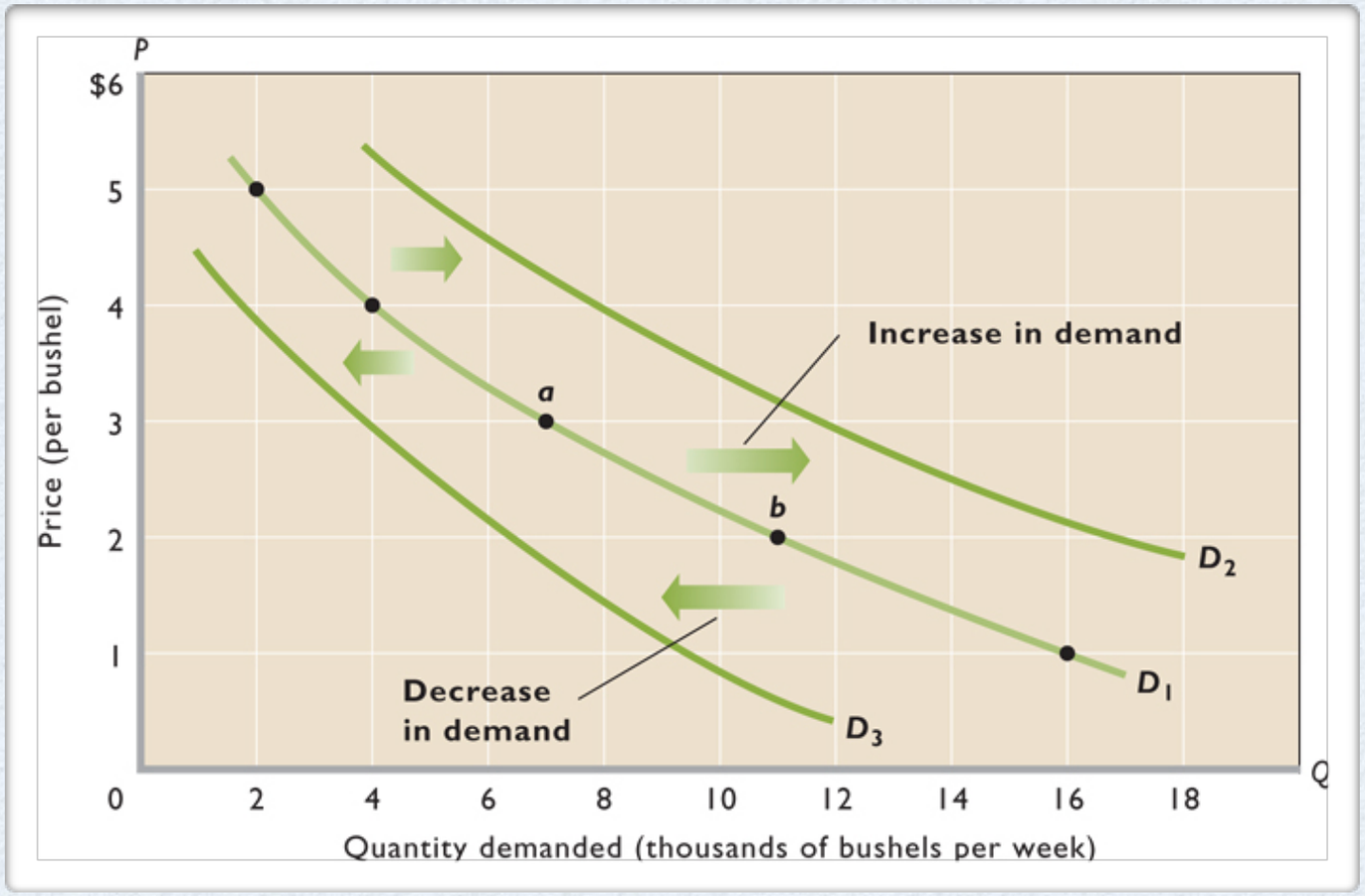
Demand - continued

- A *change in* one or more of *the determinants of demand* will change the demand ➠ **demand curve will shift**.
- The **determinants of demand**

1. **Tastes** - Tastes ⇑ ➠ demand at all price levels ⇑ ➠ D⇑
2. **Number of buyers** - # of buyers in the market ⇑ ➠ D⇑
3. **Income** - Products whose demand varies directly with income are called **superior goods or normal goods**. Y⇑ ➠ D⇑ Products whose demand varies inversely with income are called **inferior goods**. Y⇑ ➠ D⇓
4. **Prices of related goods**
   a. **Substitutes** - $P_{chicken}$⇑ ➠ D_{beef}⇑
   b. **Complementary** - P_{cds}⇓ ➠ $D_{cd\ players}$⇑
   c. **Unrelated** - P_{cars} X $D_{bananas}$ ➠ Independent goods
5. **Expectations** - P_{gas}⇑ tomorrow ➠ D_{gas}⇑ today

Demand - continued

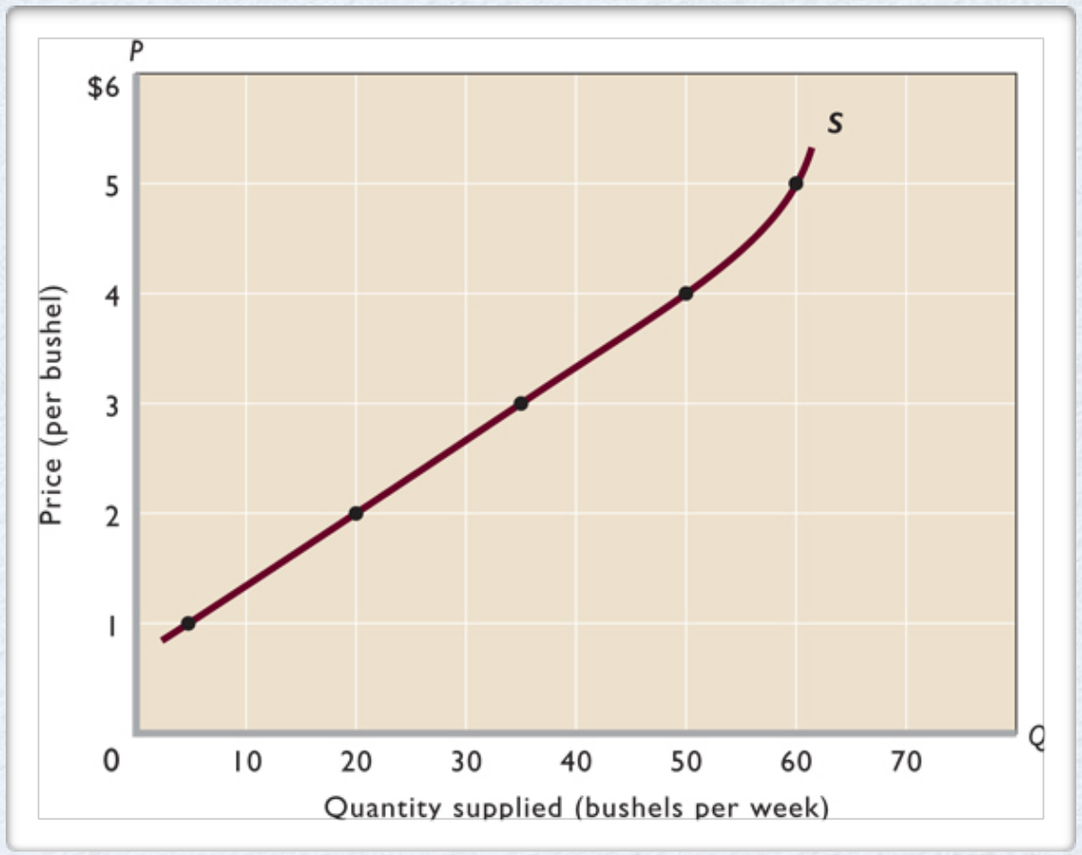
- **Changes in quantity demanded** ➠ move from a ➠ b
- **Changes in demand** ➠ move from D_1 ➠ D_2 or D_3



Supply

- **Supply** is a schedule or a curve showing the various amounts of a product that producers are willing and able to make available for sale at each of a series of possible prices during a specific period.
- **Market supply** is the sum of the quantities supplied by each producer at each price level. Graphically, the horizontal summation of each individual supply curve at each price level.

Supply of Corn	
Price per Bushel	Quantity Supplied per Week
$5	60
4	50
3	35
2	20
1	5

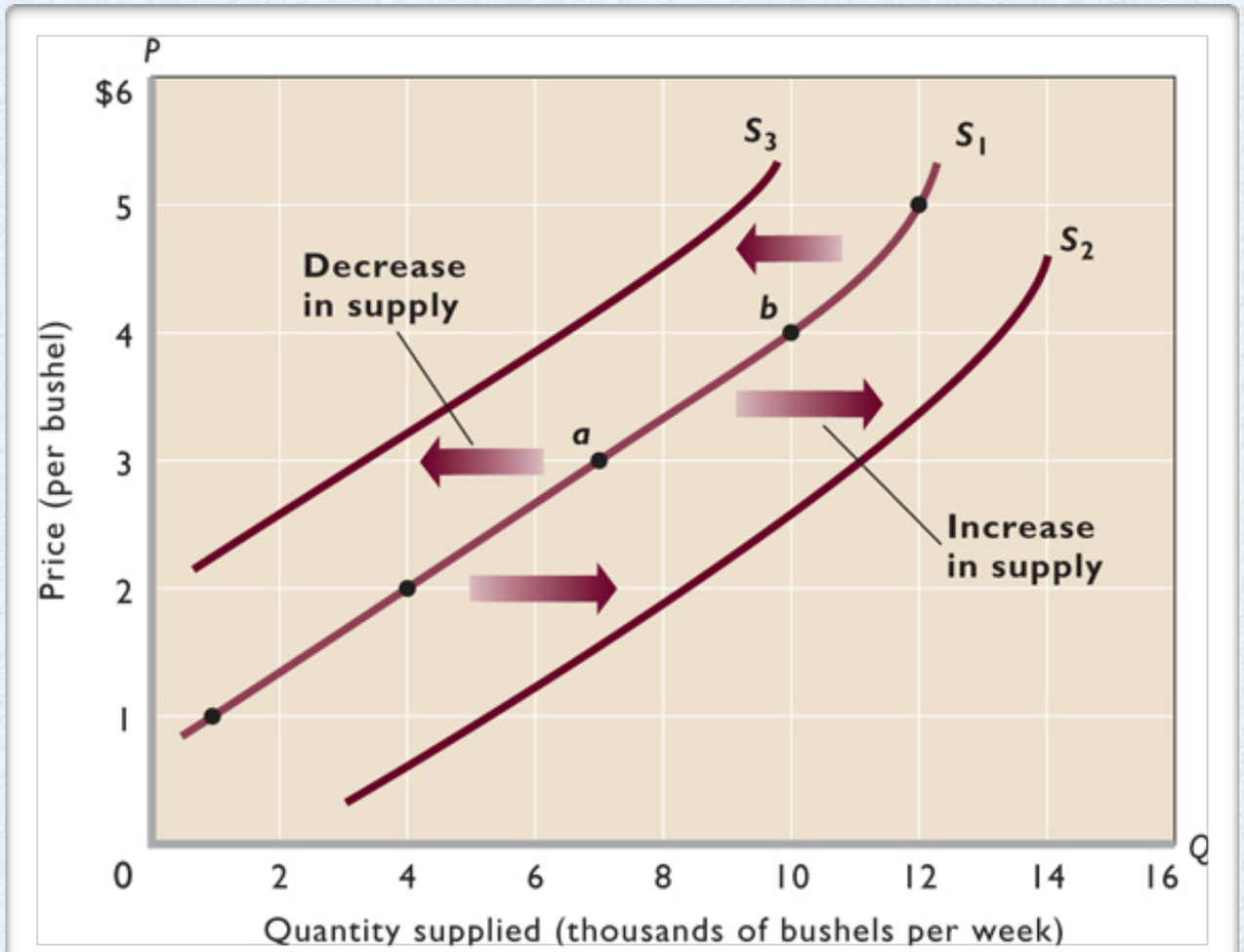


Supply - continued

- **Changes in the determinants of supply will cause the supply curve to shift.**
- **Determinants of supply**
  1. **Resource prices** - $P_{resources} \Uparrow$ ➠ Cost ⇑ ➠ $\prod \Downarrow$ ➠ no more incentive to supply products ➠ S⇓
  2. **Technology** - Technology ⇑ ➠ Cost ⇓ ➠ $\prod \Uparrow$ ➠ production ⇑ ➠ S⇑
  3. **Taxes and subsidies** - *Taxes are costs, subsidies are extra income*. Taxes ⇑ ➠ Cost ⇑ ➠ $\prod \Downarrow$ ➠ no more incentive to supply products ➠ S⇓. Subsidies ⇑ ➠ Cost ⇓ ➠ $\prod \Uparrow$ ➠ greater incentive to produce ➠ S⇑.
  4. **Prices of other goods** - $P_{soccer\ balls} \Downarrow$ and $P_{basket\ balls} \Uparrow$ ➠ suppliers produce basket balls instead of soccer balls ➠ $S_{soccer\ balls} \Downarrow$ ➠ $S_{basket\ balls} \Uparrow$
  5. **Producer expectations** - Farmers anticipate P⇑ next year withhold grains this year ➠ $S_{grain} \Downarrow$ today
  6. **Number of sellers** - The # of suppliers ⇑ ➠ market supply ⇑

Supply - continued

- **Changes in quantity supplied** ➠ move from a ➠ b
- **Changes in supply** ➠ move from S_1 ➠ S_2 or S_3



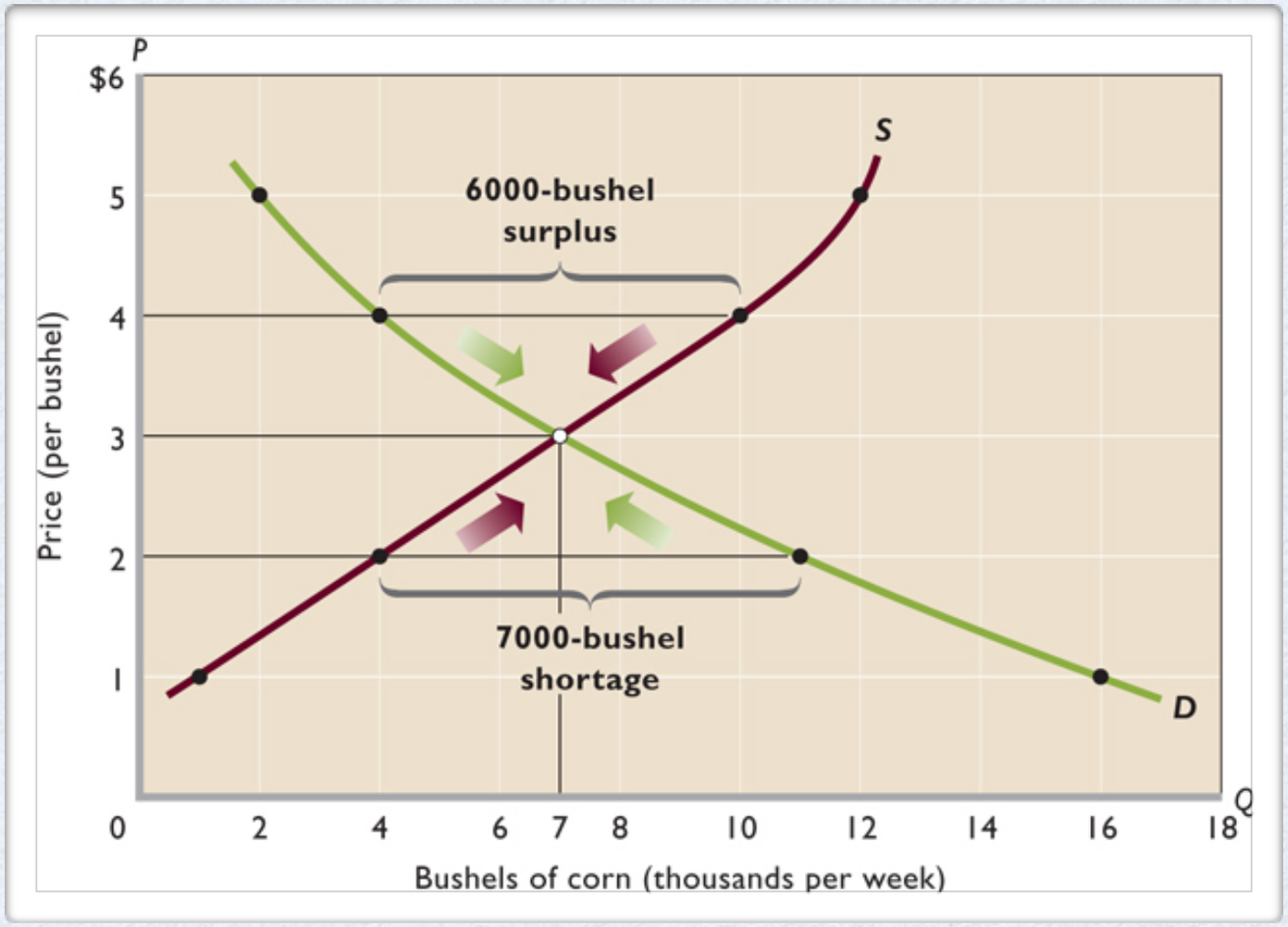
Market Equilibrium

- **Equilibrium Price and Quantity**
  - The **equilibrium price** is where quantity demanded = quantity supplied

Market Supply of and Demand for Corn

(1) Total Quantity Supplied per Week	(2) Price per Bushel	(3) Total Quantity Demanded per Week	(4) Surplus (+) or Shortage (−)*
12,000	$5	2,000	+10,000 ↓
10,000	4	4,000	+6,000 ↓
7,000	***3***	***7,000***	***0***
4,000	2	11,000	−7,000 ↑
1,000	1	16,000	−15,000 ↑

*Arrows indicate the effect on price.



Market Equilibrium - continued

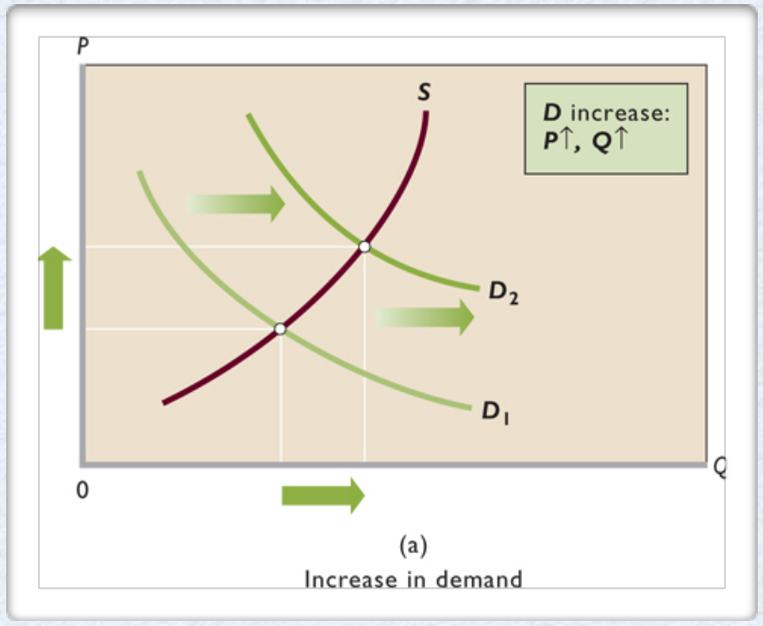
- **Rationing function of prices** - the ability of the competitive forces of supply and demand to establish a price at which selling and buying decisions are consistent.

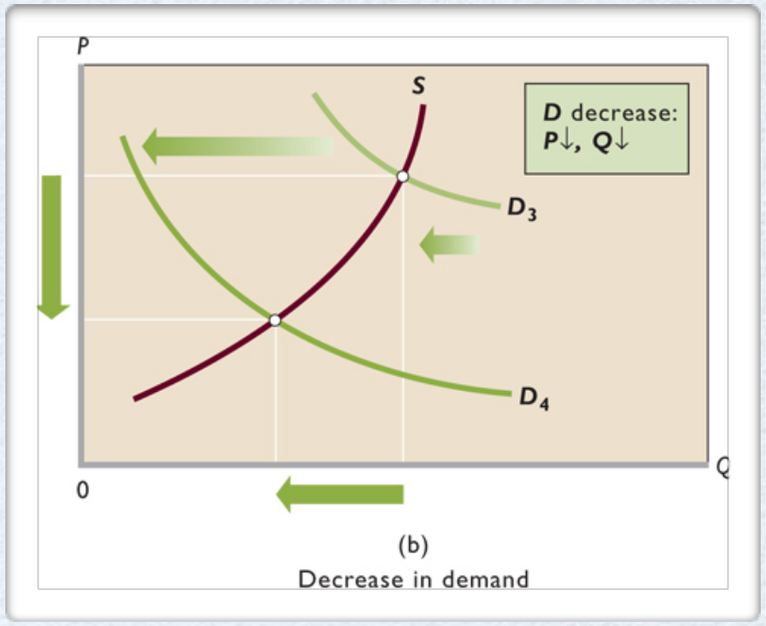
- **Productive efficiency** - the production of any good in the least cost way.

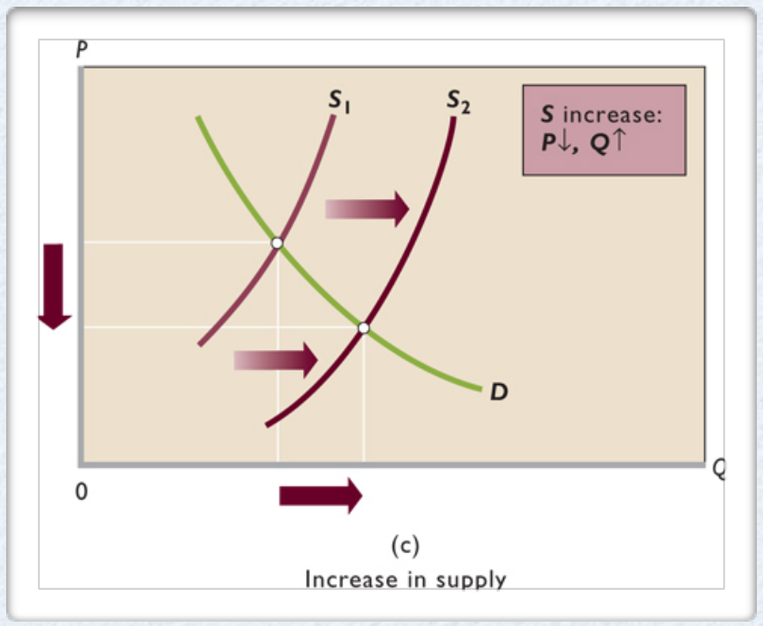
- **Allocative efficiency** - the particular mix of goods being produced are most valued by society.

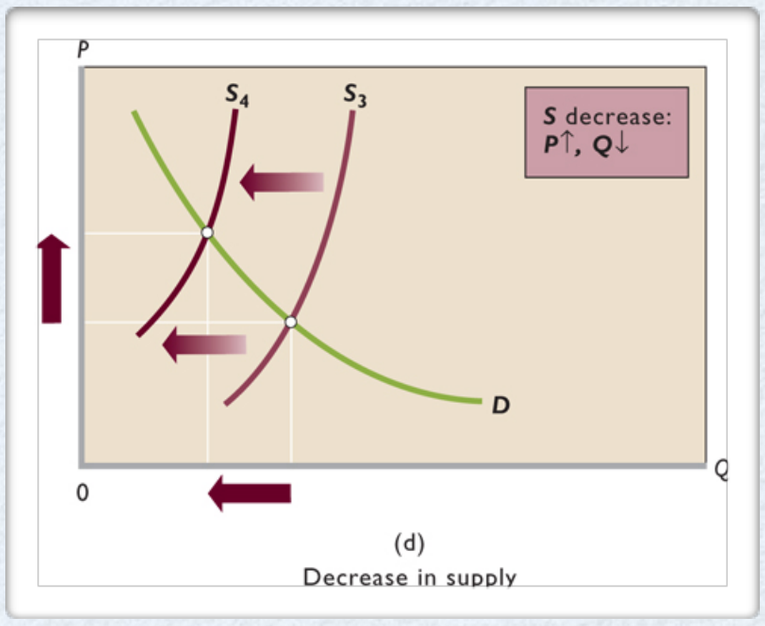
Market Equilibrium - continued

Changes in Supply, Demand, and Equilibrium









Market Equilibrium - continued

Changes in Supply, Demand, and Equilibrium

Change in Supply	Change in Demand	Effect on Equilibrium Price	Effect on Equilibrium Quantity
1. Increase	Decrease	Decrease	Indeterminate
2. Decrease	Increase	Increase	Indeterminate
3. Increase	Increase	Indeterminate	Increase
4. Decrease	Decrease	Indeterminate	Decrease

Application: Government Set Prices

- **Price ceiling** - sets the ***maximum legal price*** a seller may charge for a product or a service. When the ceiling price is below the equilibrium price, a chronic product shortage results. An imposed price disrupts the rationing function of the markets.

- **Price floors** - a ***minimum price*** fixed by the government. If the price floor is above the equilibrium, a chronic product surplus result. An imposed price disrupts the rationing function of the markets.