

## Chapter 3

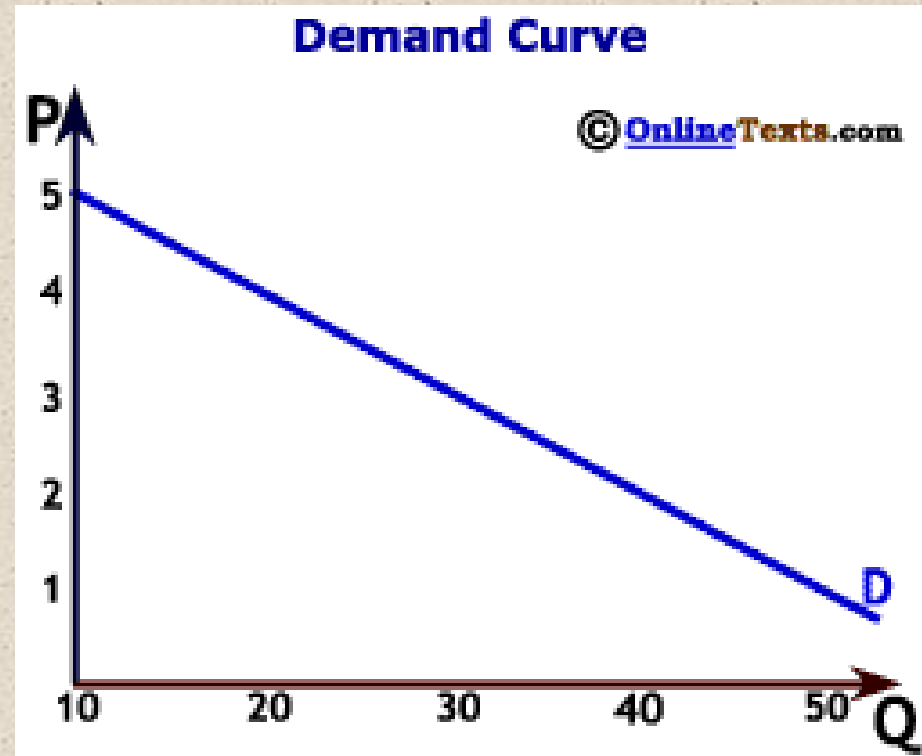
# Supply and Demand

# The Law of Demand

- The *law of demand* holds that other things equal, as the price of a good or service rises, its quantity demanded falls.
  - The reverse is also true: as the price of a good or service falls, its quantity demanded increases.

# Demand Curve

TABLE 1 Demand for Videos	
Price	Quantity Demanded
\$5	10
\$4	20
\$3	30
\$2	40
\$1	50



The demand curve has a negative slope, consistent with the law of demand.

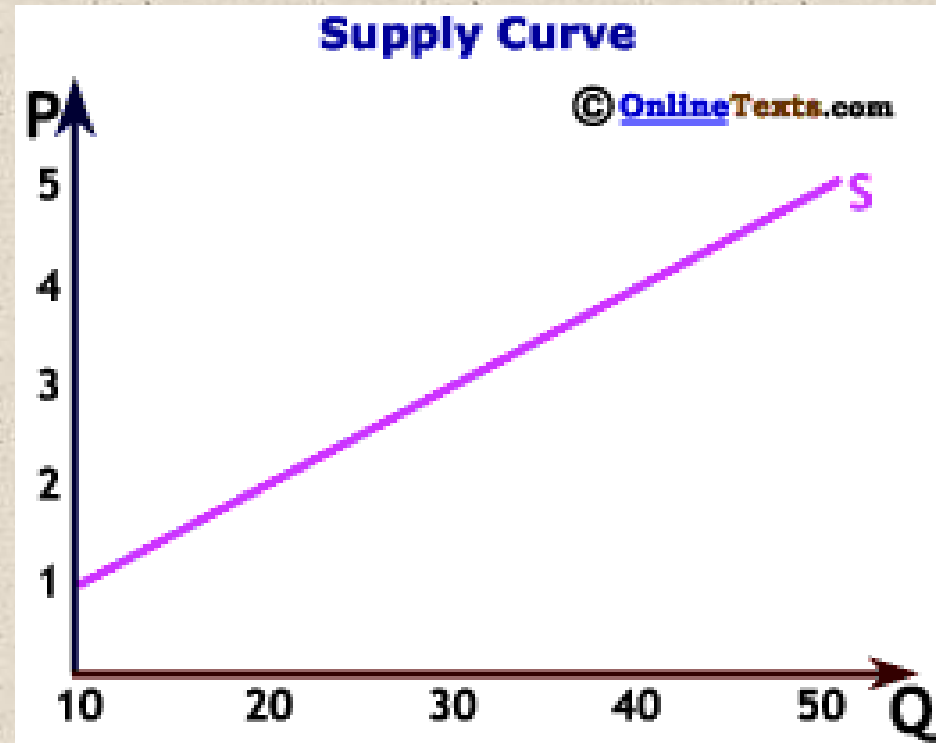
# The Law of Supply

- The *law of supply* holds that other things equal, as the price of a good rises, its quantity supplied will rise, and vice versa.
- Why do producers produce more output when prices rise?
  - They seek higher profits
  - They can cover higher marginal costs of production

# Supply Curve

**TABLE 2**  
**Supply of Videos**

Price	Quantity Supplied
\$5	50
\$4	40
\$3	30
\$2	20
\$1	10



The supply curve has a positive slope, consistent with the law of supply.

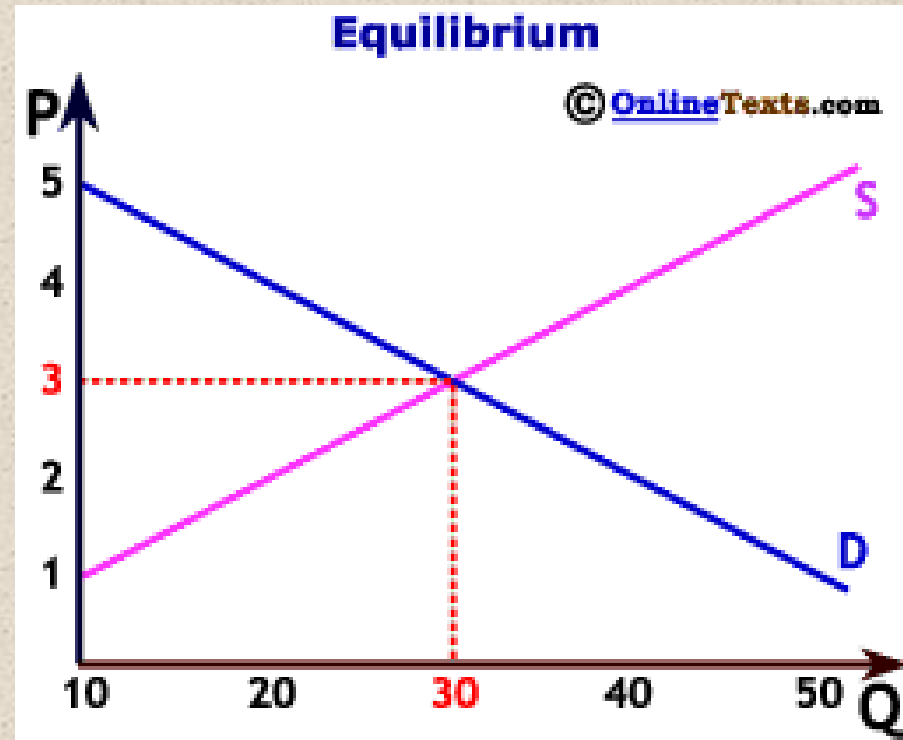
# Equilibrium

- In economics, an *equilibrium* is a situation in which:
  - there is no inherent tendency to change,
  - quantity demanded equals quantity supplied, and
  - the market just clears.

# Equilibrium

**TABLE 3**  
**Video Market Equilibrium**

Price	Quantity Demanded	Quantity Supplied
\$5	10	50
\$4	20	40
<b>\$3</b>	<b>30</b>	<b>30</b>
\$2	40	20
\$1	50	10



Equilibrium occurs at a price of \$3 and a quantity of 30 units.

# Shortages and Surpluses

- A *shortage* occurs when quantity demanded exceeds quantity supplied.
  - A shortage implies the market price is too low.
- A *surplus* occurs when quantity supplied exceeds quantity demanded.
  - A surplus implies the market price is too high.

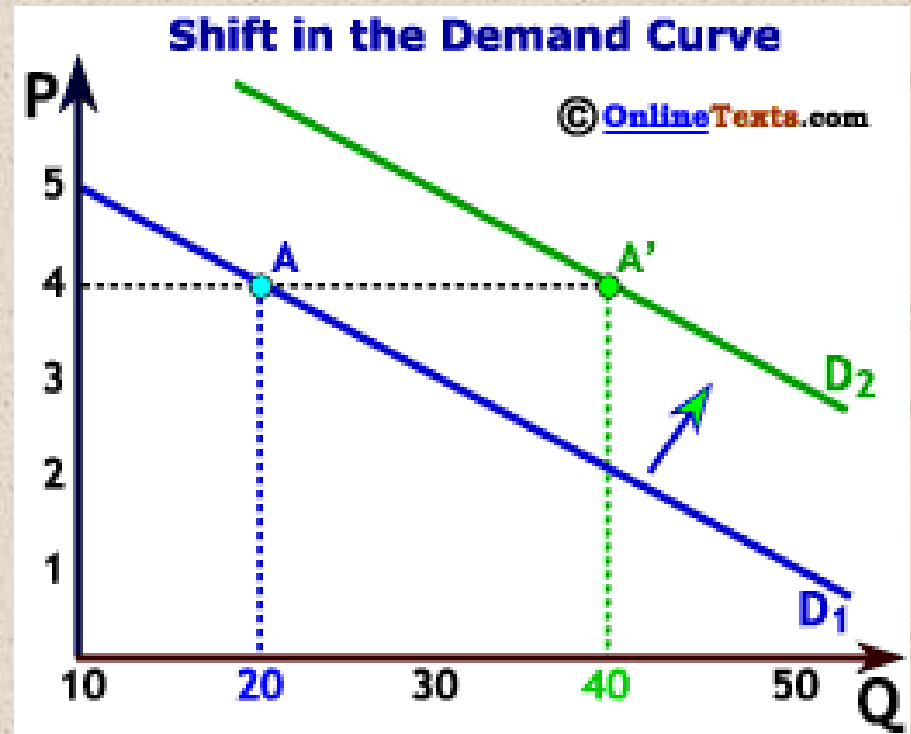
# Shift in the Demand Curve

- A change in any variable other than price that influences quantity demanded produces a *shift in the demand curve* or a change in demand.
- Factors that shift the demand curve include:
  - Change in consumer incomes
  - Population change
  - Consumer preferences
  - Prices of related goods:
    - Substitutes: goods consumed in place of one another
    - Complements: goods consumed jointly

# Shift in the Demand Curve

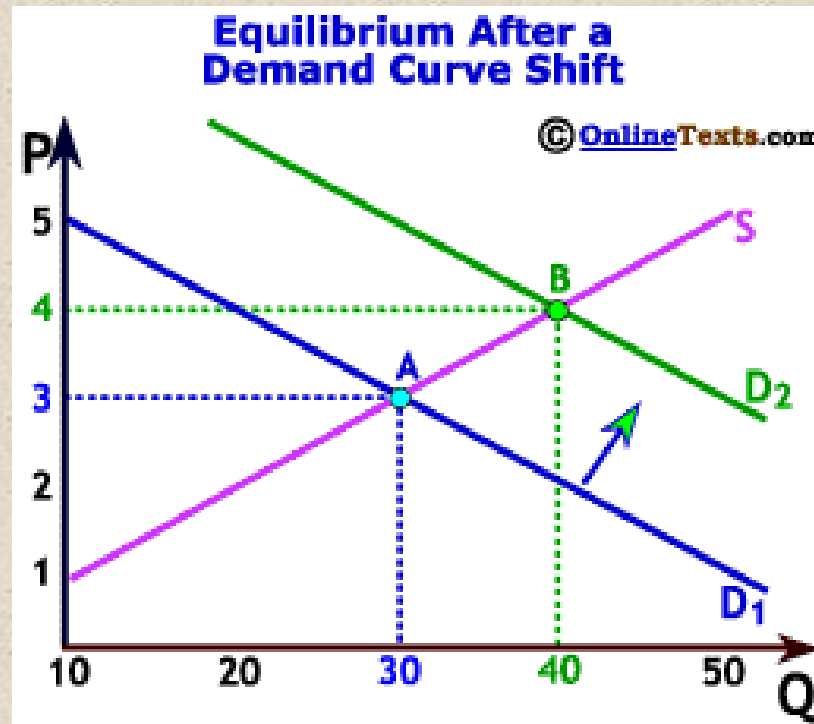
**TABLE 4**  
Change in Demand for  
Videos after Incomes Rise

Price	Initial Quantity Demanded	New Quantity Demanded	Quantity Supplied
\$5	10	30	50
<b>\$4</b>	20	<b>40</b>	<b>40</b>
\$3	30	50	30
\$2	40	60	20
\$1	50	70	10



This demand curve has shifted to the right. Quantity demanded is now higher at any given price.

# Equilibrium After a Demand Shift



The shift in the demand curve moves the market equilibrium from point A to point B, resulting in a higher price and higher quantity.

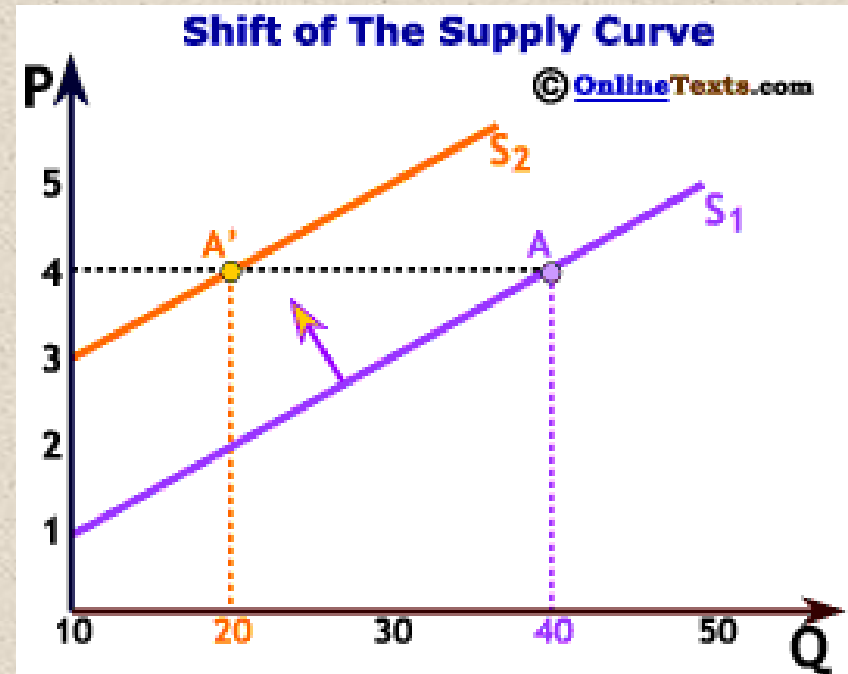
# Shift in the Supply Curve

- A change in any variable other than price that influences quantity supplied produces a *shift in the supply curve* or a change in supply.
- Factors that shift the supply curve include:
  - Change in input costs
  - Increase in technology
  - Change in size of the industry

# Shift in the Supply Curve

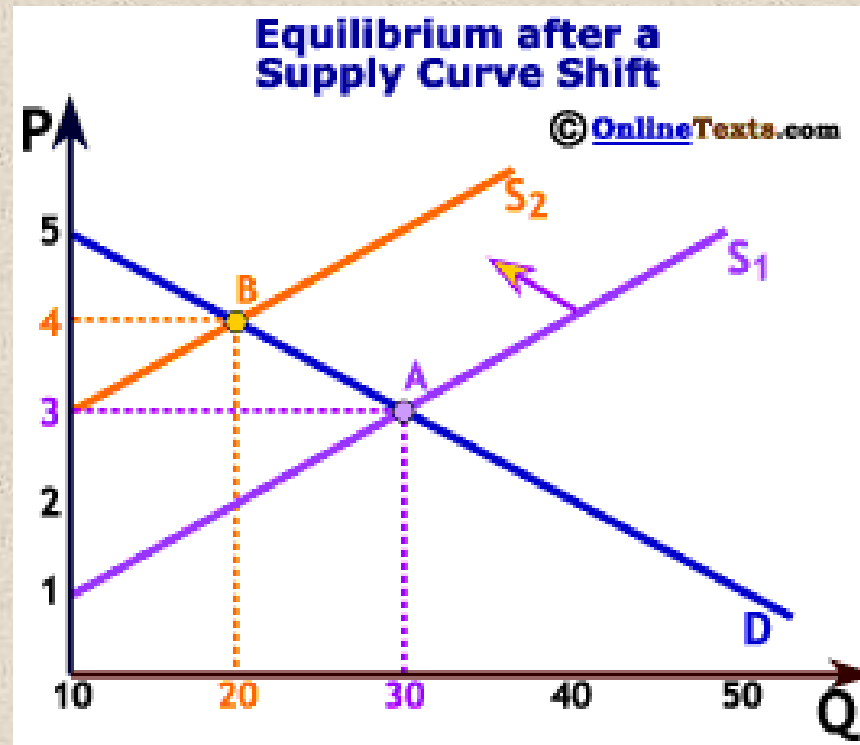
**TABLE 5**  
Change in Supply due to an  
Increase in Video Costs

Price	Quantity Demanded	Initial Quantity Supplied	New Quantity Supplied
\$5	10	50	30
<b>\$4</b>	<b>20</b>	40	<b>20</b>
\$3	30	30	10
\$2	40	20	0
\$1	50	10	0



For an given rental price, quantity supplied is now lower than before.

# Equilibrium After a Supply Shift

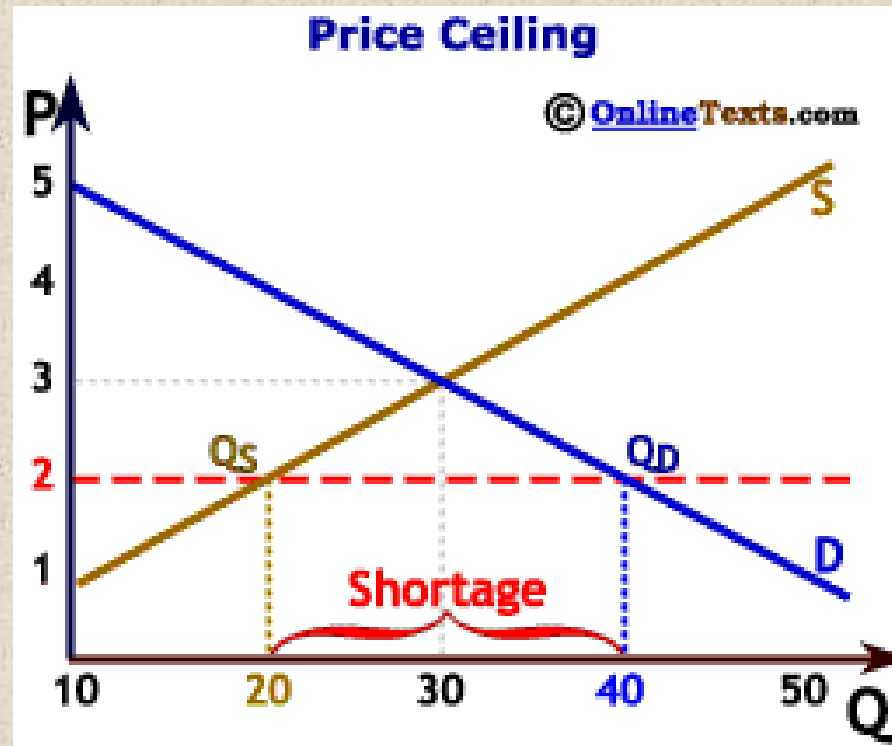


The shift in the supply curve moves the market equilibrium from point A to point B, resulting in a higher price and lower quantity.

# Price Ceilings & Floors

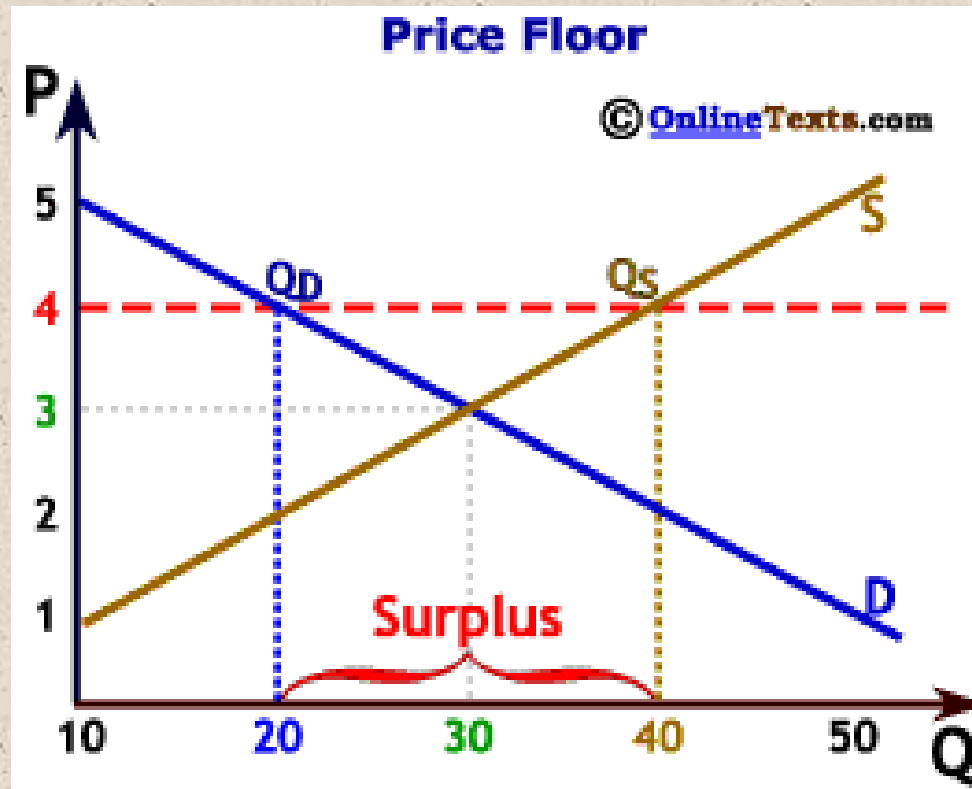
- A *price ceiling* is a legal maximum that can be charged for a good.
  - Results in a shortage of a product
  - Common examples include apartment rentals and credit cards interest rates.
- A *price floor* is a legal minimum that can be charged for a good.
  - Results in a surplus of a product
  - Common examples include soybeans, milk, minimum wage

# Price Ceiling



A price ceiling is set at \$2 resulting in a shortage of 20 units.

# Price Floor



A price floor is set at \$4 resulting in a surplus of 20 units.