

## DEMAND AND SUPPLY



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### Objectives

- Describe a competitive market and think about a price as an opportunity cost
- Explain the factors that influence demand
- Explain the factors that influence supply
- Explain how demand and supply determine prices and quantities bought and sold
- Use demand and supply to make predictions about changes in prices and quantities

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### Markets and Prices

A *market* is any arrangement that enables buyers and sellers to get information and do business with each other.

A **competitive market** is a market that has many buyers and many sellers so no single buyer or seller can influence the price.

The *money price* of a good is the amount of money needed to buy it.

The **relative price** of a good—the ratio of its money price to the money price of the next best alternative good—is its *opportunity cost*.

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## Demand

The **quantity demanded** of a good or service is the amount that consumers plan to buy during a particular time period, and at a particular price.

### The Law of Demand

Other things remaining the same, the higher the price of a good, the smaller is the quantity demanded.

The law of demand results from

a *substitution effect*

an *income effect*

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## Demand

### Demand Curve and Demand Schedule

The term **demand** refers to the entire relationship between the price of the good and quantity demanded of the good.

A **demand curve** shows the relationship between the quantity demanded of a good and its price when all other influences on consumers' planned purchases remain the same.

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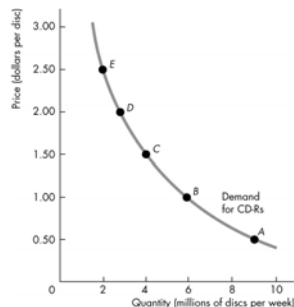
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## Demand

This figure shows a demand curve for recordable compact discs (CD-Rs).

A rise in the price, other things remaining the same, brings a decrease in the quantity demanded and a movement along the demand curve.



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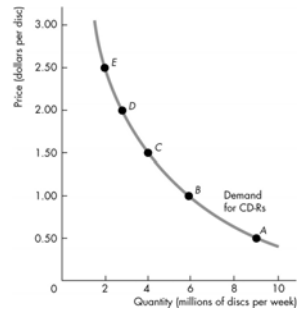
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## Demand

A demand curve is also a *willingness-and-ability-to-pay* curve.

The smaller the quantity available, the higher is the price that someone is willing to pay for another unit.

Willingness to pay measures **marginal benefit**.



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## Demand

### A Change in Demand

▪ The quantity of the good that people plan to buy changes at each and every price, so there is a new demand curve.

▪ **When demand increases**, the quantity that people plan to buy increases at each and every price so the **demand curve shifts rightward**.

▪ **When demand decreases**, the quantity that people plan to buy decreases at each and every price so the **demand curve shifts leftward**.

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## Demand

Factors that change demand.

1. **Prices of related goods**
  - **substitute** in consumption is a good that can be consumed instead of another good.
  - **Complement in consumption** is a good that is consumed in conjunction with another good.
2. **Expected future prices**
3. **Income**
  - **Normal good**
  - **Inferior good**
  - **Luxury good**
4. **Population**
5. **Taxes on buyers**
6. **Preferences**

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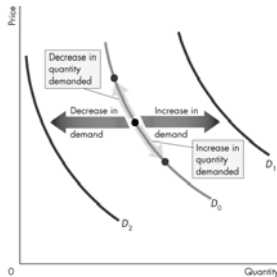
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## Demand

Change in Demand vs. Change in Quantity Demanded



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## Supply

The **quantity supplied** of a good or service is the amount that producers plan to sell during a given time period at a particular price.

### The Law of Supply

Other things remaining the same, the higher the price of a good, the greater is the quantity supplied.

- The law of supply results from the general tendency for the marginal cost of producing a good or service to increase as the quantity produced increases.
- Producers are willing to supply only if they at least cover their marginal cost of production.

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## Supply

### Supply Curve and Supply Schedule

The term **supply** refers to the entire relationship between the quantity supplied and the price of a good.

The **supply curve** shows the relationship between the quantity supplied of a good and its price when all other influences on producers' planned sales remain the same.

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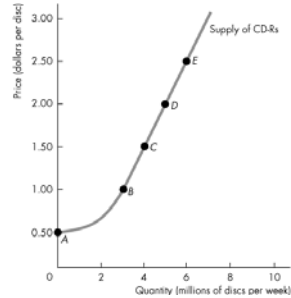
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## Supply Curve

This graph shows a supply curve of recordable compact discs (CD-Rs).

A rise in the price, other things remaining the same, brings an increase in the quantity supplied and a movement along the supply curve.



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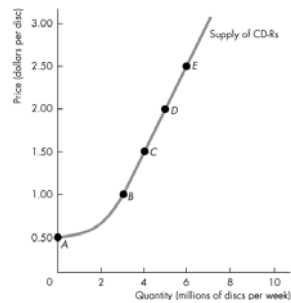
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## Supply

A supply curve is also a *minimum-supply-price* curve.

The greater the quantity produced, the higher is the price that a firm must offered to be willing to produce that quantity.



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## Supply

### A Change in Supply

▪The quantity of the good that producers plan to sell changes at each and every price, so there is a new supply curve.

▪**When supply increases**, the quantity that producers plan to sell increases at each and every price so the **supply curve shifts rightward**.

▪**When supply decreases**, the quantity that producers plan to sell decreases at each and every price so the **supply curve shifts leftward**.

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## Supply

Factors that change supply.

1. **Prices of inputs**
2. **Prices of related goods produced**
  - Substitutes in production
  - Complements in production
3. **Expected future prices**
4. **Number of sellers**
5. **Taxes on Sellers**
6. **Technology**

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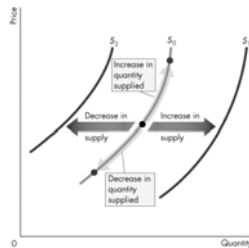
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## Supply

Change in supply vs. change in quantity supplied



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## Market Equilibrium

### Equilibrium

- situation in which opposing forces balance each other.
- occurs when the price balances the plans of buyers and sellers.

### Equilibrium price

- price at which the quantity demanded equals the quantity supplied.

### Equilibrium quantity

- quantity bought and sold at the equilibrium price.

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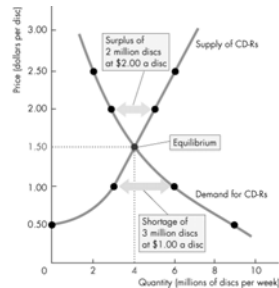
## Market Equilibrium

### Price Adjustments

At prices above the equilibrium, a *surplus* forces the price down.

At prices below the equilibrium, a *shortage* forces the price up.

At the equilibrium price, buying plans selling plans agree and the price doesn't change.




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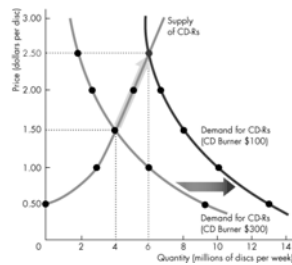
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## Predicting Changes in Price and Quantity

### A Change in Demand

An increase in demand shifts the demand curve rightward and creates a shortage at the original price.

The price rises and the quantity supplied increases.




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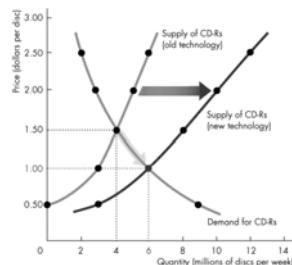
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## Predicting Changes in Price and Quantity

### A Change in Supply

An increase in supply shifts the supply curve rightward and creates a surplus at the original price.

The price falls and the quantity demanded increases.




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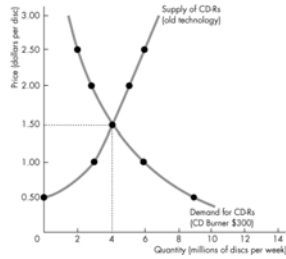
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## Predicting Changes in Price and Quantity

### A Change in Both Demand and Supply

A change in both demand and supply changes the equilibrium price and the equilibrium quantity but we need to know the relative magnitudes of the changes to predict some of the consequences.




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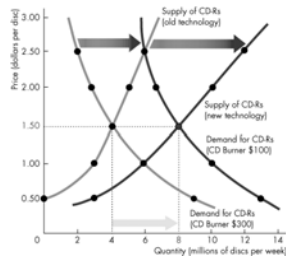
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## Predicting Changes in Price and Quantity

An increase in *both* demand and supply increases the equilibrium quantity but has an uncertain effect on the equilibrium price.




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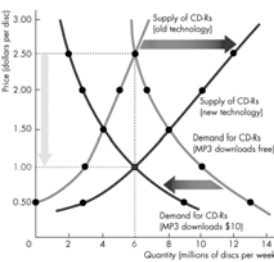
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## Predicting Changes in Price and Quantity

An increase in supply and a decrease in demand lowers the equilibrium price but has an uncertain effect on the equilibrium quantity.




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## Price controls

1. **A price ceiling is a maximum allowable price.**
  - Results in a continuing shortage if ceiling is BELOW equilibrium price.
2. **A price floor is a minimum allowable price.**
  - Results in a continuing surplus if floor is ABOVE equilibrium price.

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