



The Market Forces of Supply and Demand

Copyright © 2001 by Harcourt, Inc.

All rights reserved. Requests for permission to make copies of any part of the work should be mailed to:

Permissions Department, Harcourt College Publishers,
6277 Sea Harbor Drive, Orlando, Florida 32887-6777.

The Market Forces of Supply and Demand

- ◆ *Supply* and *demand* are the two words that economists use most often.
- ◆ *Supply* and *demand* are the forces that make market economies work.
- ◆ Modern microeconomics is about supply, demand, and market equilibrium.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.



Markets



- ◆ A **market** is a group of buyers and sellers of a particular good or service.
- ◆ The terms supply and demand refer to the behavior of people . . . as they interact with one another in **markets**.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Markets

- ◆ Buyers determine **demand**.



- ◆ Sellers determine **supply**.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Market Type: A Competitive Market

A competitive market is a market. . .

...with *many* buyers and sellers.

...that is not controlled by any one person.

...in which a *narrow range of prices* are established that buyers and sellers act upon.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Competition: Perfect and Otherwise

Perfect Competition

- ◆ **Products are the same**
- ◆ **Numerous buyers and sellers so that each has no influence over price**
- ◆ **Buyers and Sellers are price takers**

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Competition: *Perfect and Otherwise*

- ◆ **Monopoly**
 - ◆ *One seller, and seller controls price*
- ◆ **Oligopoly**
 - ◆ *Few sellers*
 - ◆ *Not always aggressive competition*

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Competition: *Perfect and Otherwise*

- ◆ **Monopolistic Competition**
 - ◆ *Many sellers*
 - ◆ *Slightly differentiated products*
 - ◆ *Each seller may set price for its own product*

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Demand

Quantity demanded
is the amount
of a good that buyers are
willing and able
to purchase.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Law of Demand

The law of demand states
that there is an *inverse*
relationship between price
and quantity demanded.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Demand Schedule

The demand schedule is a table that shows the relationship between the **price** of the good and the **quantity demanded**.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Demand Schedule



Price	Quantity
\$0.00	12
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Determinants of Demand

- ◆ Market price
- ◆ Consumer income
- ◆ Prices of related goods
- ◆ Tastes
- ◆ Expectations



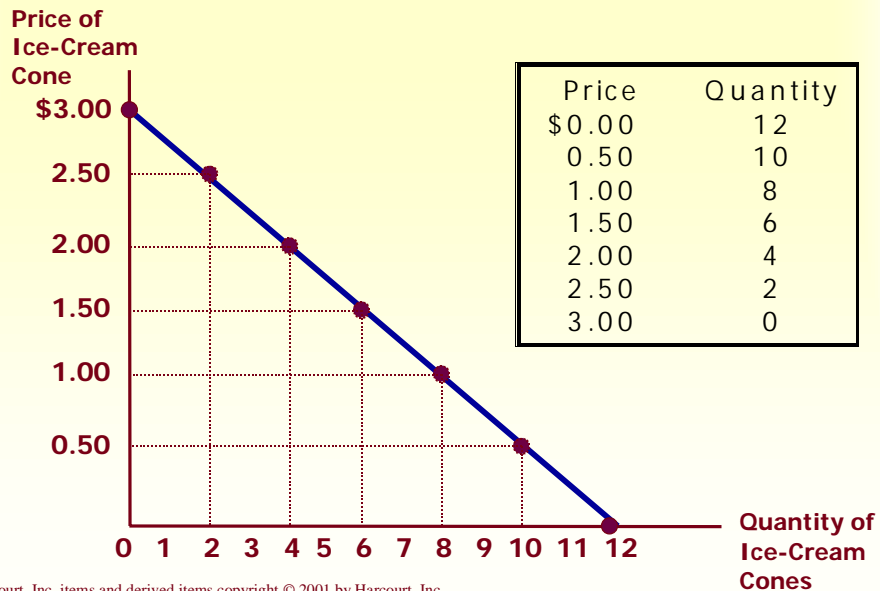
Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Demand Curve

The **demand curve** is the downward-sloping line relating price to quantity demanded.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Demand Curve



Ceteris Paribus

Ceteris paribus is a Latin phrase that means all variables other than the ones being studied are assumed to be constant. Literally, *ceteris paribus* means “other things being equal.”

The demand curve slopes downward because, ceteris paribus, lower prices imply a greater quantity demanded!

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Market Demand

- ◆ **Market demand** refers to the sum of all individual demands for a particular good or service.
- ◆ Graphically, individual demand curves are summed ***horizontally*** to obtain the market demand curve.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Determinants of Demand

- ◆ Market price
- ◆ Consumer income
- ◆ Prices of related goods
- ◆ Tastes
- ◆ Expectations

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

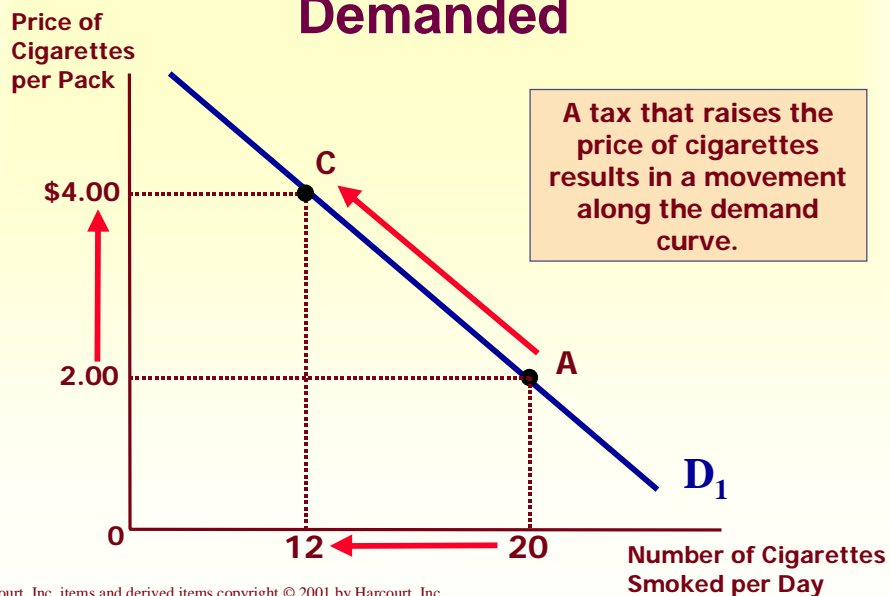
Change in Quantity Demanded versus Change in Demand

Change in Quantity Demanded

- ◆ Movement along the demand curve.
- ◆ Caused by a change in the *price* of the product.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Changes in Quantity Demanded



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

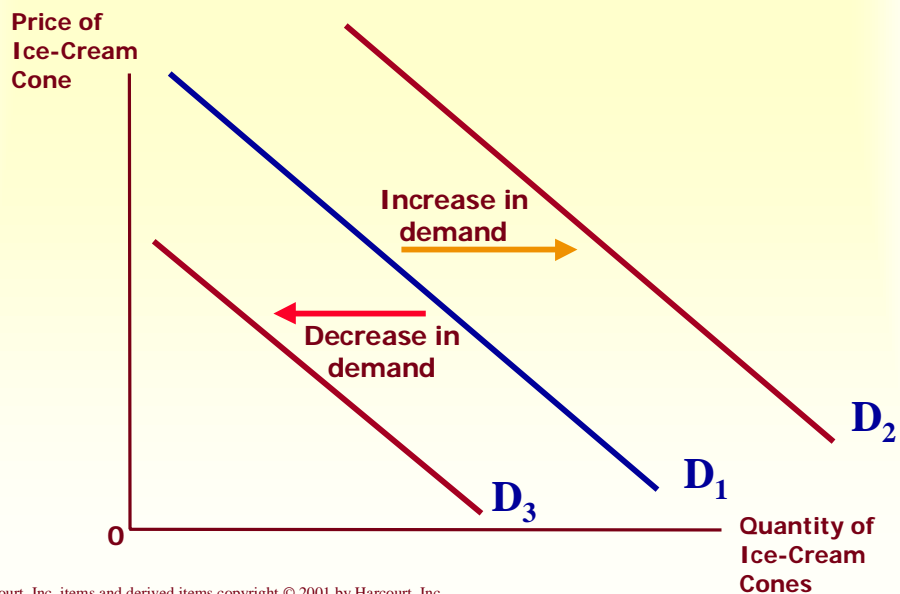
Change in Quantity Demanded versus Change in Demand

Change in Demand

- ◆ A shift in the demand curve, either to the left or right.
- ◆ Caused by a change in a determinant other than the price.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Changes in Demand



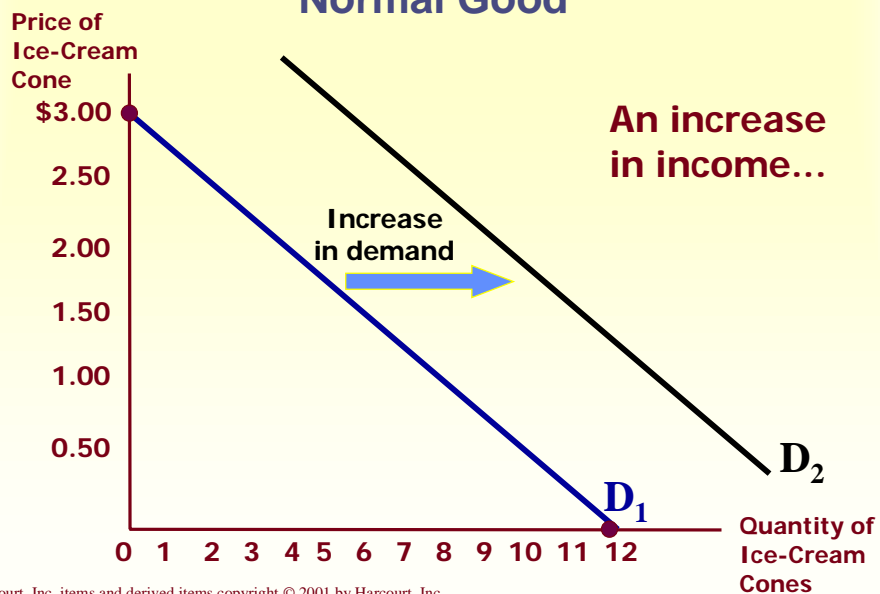
Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Consumer Income

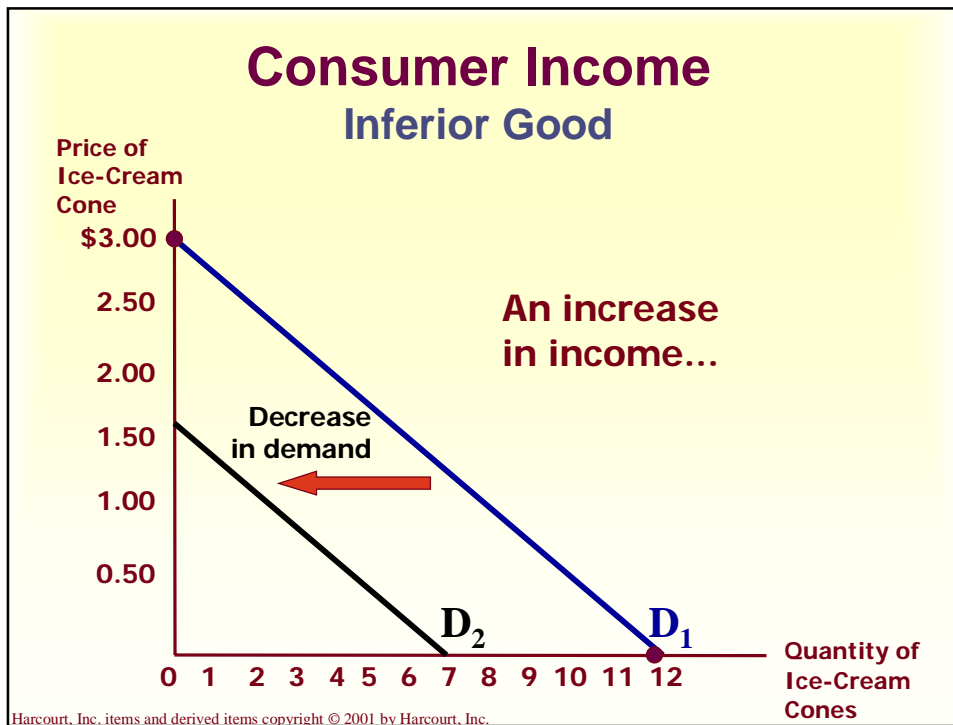
- ◆ As income increases the demand for a **normal good** will *increase*.
- ◆ As income increases the demand for an **inferior good** will *decrease*.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Consumer Income Normal Good



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.



- ### Prices of Related Goods Substitutes & Complements
- ◆ When a fall in the price of one good reduces the demand for another good, the two goods are called **substitutes**.
 - ◆ When a fall in the price of one good increases the demand for another good, the two goods are called **complements**.
- Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Change in Quantity Demanded versus Change in Demand

Variables that Affect Quantity Demanded	A Change in This Variable . . .
Price	Represents a movement along the demand curve
Income	Shifts the demand curve
Prices of related goods	Shifts the demand curve
Tastes	Shifts the demand curve
Expectations	Shifts the demand curve
Number of buyers	Shifts the demand curve

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply

Quantity supplied is the amount of a good that sellers are willing and able to sell.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Law of Supply

The **law of supply** states that there is a *direct (positive) relationship* between price and quantity supplied.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Determinants of Supply

- ◆ Market price
- ◆ Input prices
- ◆ Technology
- ◆ Expectations
- ◆ Number of producers



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply Schedule

The **supply schedule** is a table that shows the relationship between the price of the good and the quantity supplied.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply Schedule



Price	Quantity
\$0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply Curve

The **supply curve** is the upward-sloping line relating price to quantity supplied.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply Curve

Price of
Ice-Cream
Cone

\$3.00
2.50
2.00
1.50
1.00
0.50

0 1 2 3 4 5 6 7 8 9 10 11 12

Quantity of
Ice-Cream
Cones

Price	Quantity
\$0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Market Supply

- ◆ **Market supply** refers to the sum of all individual supplies for all sellers of a particular good or service.
- ◆ Graphically, individual supply curves are summed ***horizontally*** to obtain the market supply curve.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Determinants of Supply

- ◆ Market price
- ◆ Input prices
- ◆ Technology
- ◆ Expectations
- ◆ Number of producers

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

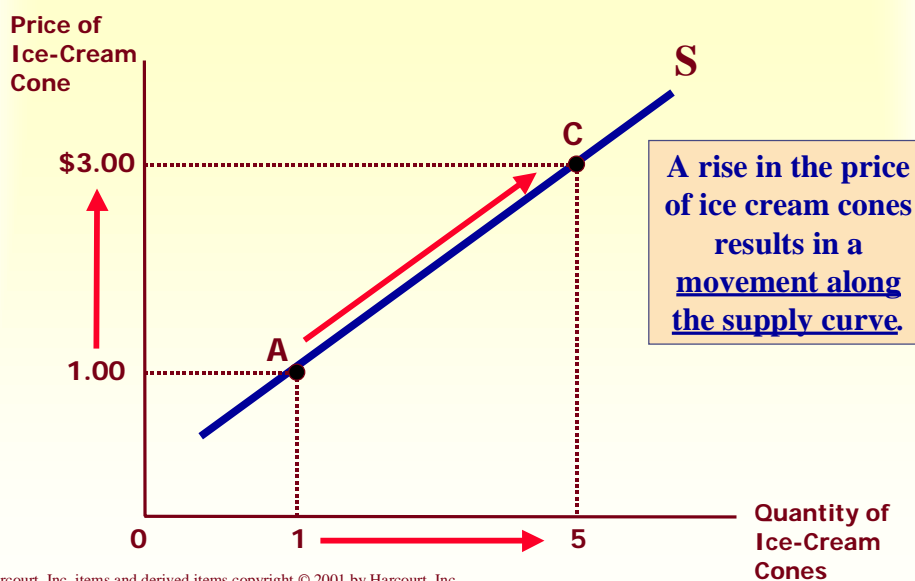
Change in Quantity Supplied versus Change in Supply

Change in Quantity Supplied

- ◆ Movement along the supply curve.
- ◆ Caused by a change in the market price of the product.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Change in Quantity Supplied



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

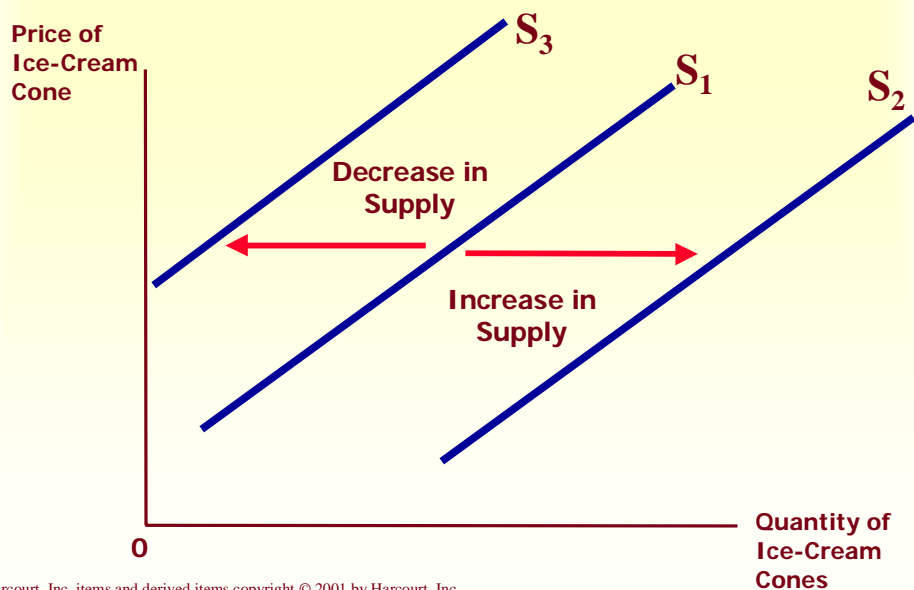
Change in Quantity Supplied versus Change in Supply

Change in Supply

- ◆ A shift in the supply curve, either to the left or right.
- ◆ Caused by a change in a determinant other than price.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Change in Supply



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Change in Quantity Supplied versus Change in Supply

Variables that Affect Quantity Supplied	A Change in This Variable . . .
Price	Represents a movement along the supply curve
Input prices	Shifts the supply curve
Technology	Shifts the supply curve
Expectations	Shifts the supply curve
Number of sellers	Shifts the supply curve

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply and Demand Together

Equilibrium Price

- ◆ The price that balances supply and demand. On a graph, it is the price at which the supply and demand curves intersect.

Equilibrium Quantity

- ◆ The quantity that balances supply and demand. On a graph it is the quantity at which the supply and demand curves intersect.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Supply and Demand Together

Demand Schedule

Price	Quantity
\$0.00	19
0.50	16
1.00	13
1.50	10
2.00	7
2.50	4
3.00	1

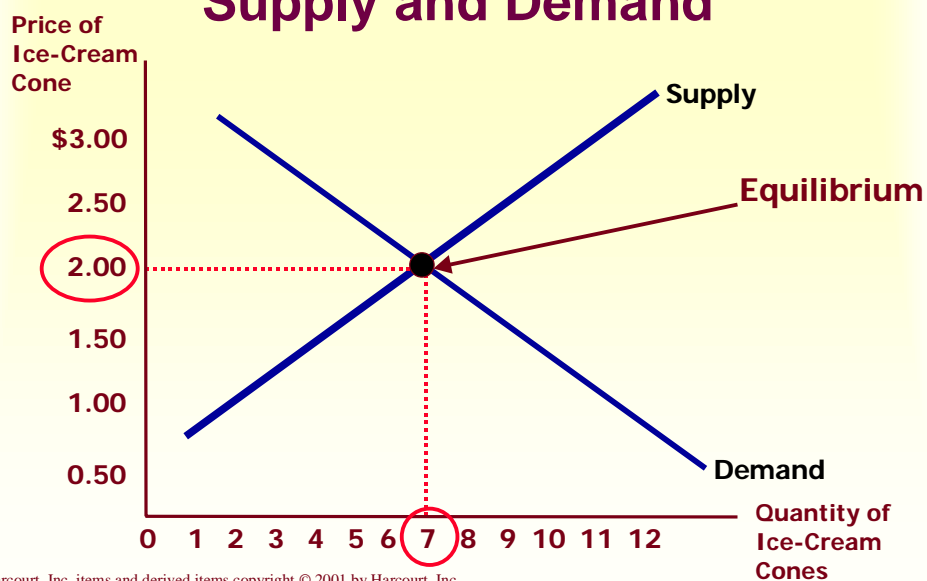
Supply Schedule

Price	Quantity
\$0.00	0
0.50	0
1.00	1
1.50	4
2.00	7
2.50	10
3.00	13

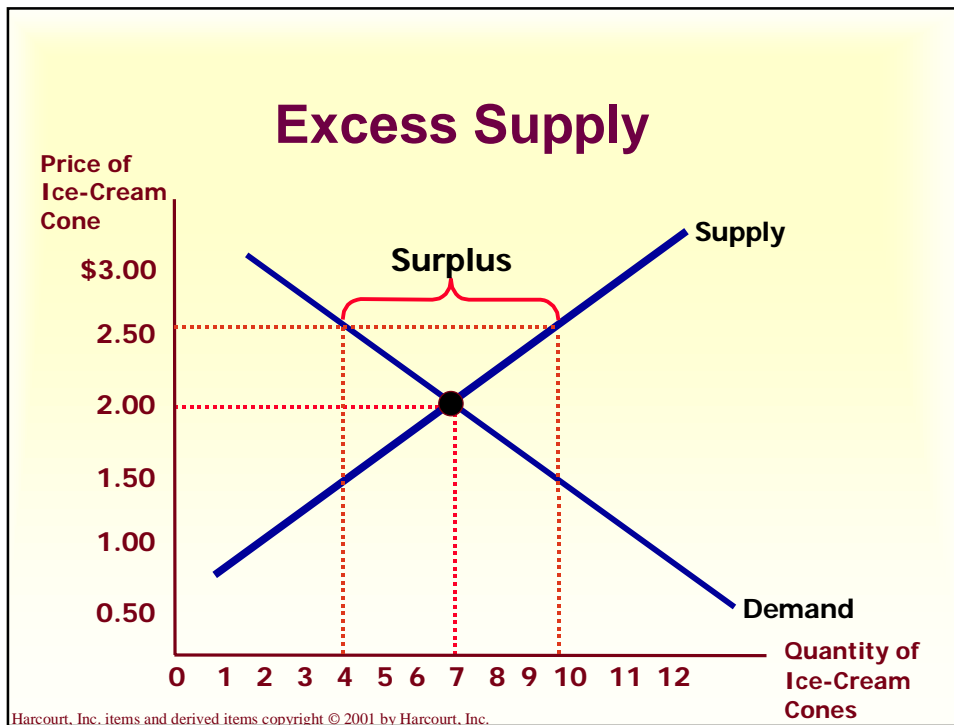
At \$2.00, the quantity demanded is equal to the quantity supplied!

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Equilibrium of Supply and Demand



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

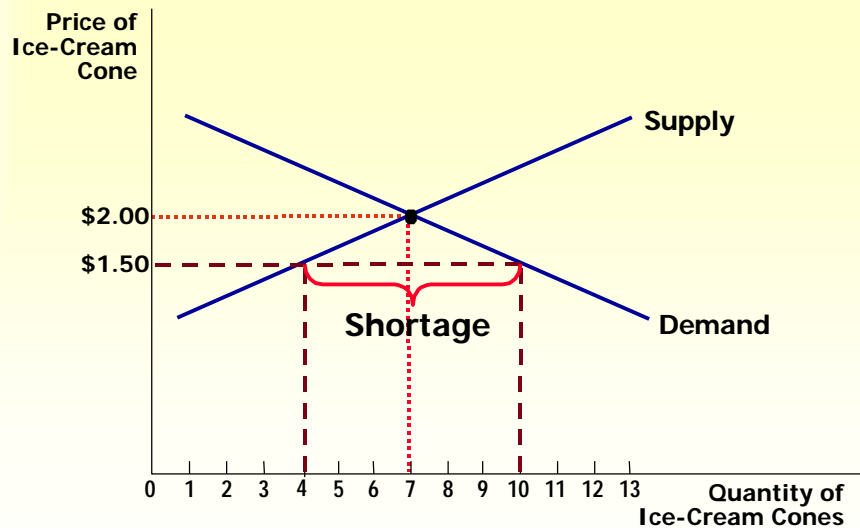


Surplus

When the price is *above* the equilibrium price, the quantity supplied exceeds the quantity demanded. There is **excess supply** or a **surplus**. Suppliers will lower the price to increase sales, thereby moving toward equilibrium.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Excess Demand



Shortage

When the price is *below* the equilibrium price, the quantity demanded exceeds the quantity supplied. There is **excess demand** or a **shortage**. Suppliers will raise the price due to too many buyers chasing too few goods, thereby moving toward equilibrium.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

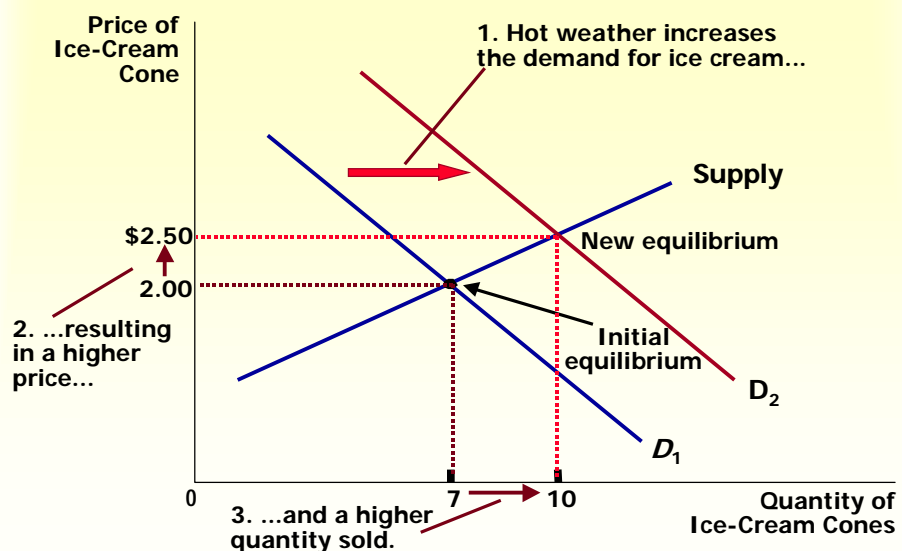
Three Steps To Analyzing Changes in Equilibrium

- ◆ Decide whether the event shifts the supply or demand curve (or both).
- ◆ Decide whether the curve(s) shift(s) to the left or to the right.
- ◆ Examine how the shift affects equilibrium price and quantity.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

How an Increase in Demand Affects the Equilibrium

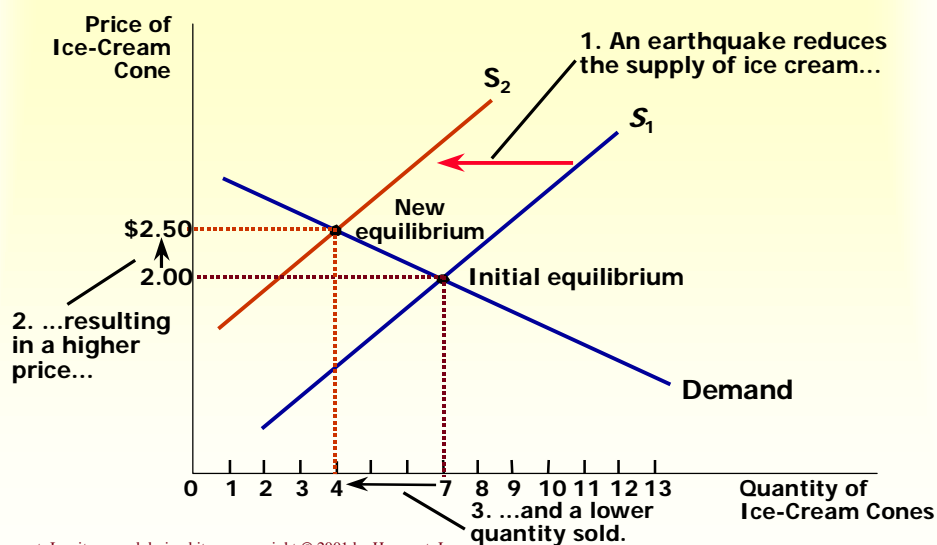


Shifts in Curves versus Movements along Curves

- ◆ A shift in the supply curve is called a *change in supply*.
- ◆ A movement along a fixed supply curve is called a *change in quantity supplied*.
- ◆ A shift in the demand curve is called a *change in demand*.
- ◆ A movement along a fixed demand curve is called a *change in quantity demanded*.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

How a Decrease in Supply Affects the Equilibrium



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

What Happens to Price and Quantity When Supply or Demand Shifts?

	No Change In Supply	An Increase In Supply	A Decrease In Supply
No Change In Demand	P same Q same	P down Q up	P up Q down
An Increase In Demand	P up Q up	P ambiguous Q up	P up Q ambiguous
A Decrease In Demand	P down Q down	P down Q ambiguous	P ambiguous Q down

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Summary

- ◆ Economists use the model of supply and demand to analyze competitive markets.
- ◆ The demand curve shows how the quantity of a good depends upon the price.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Summary

- ◆ According to the law of demand, as the price of a good rises, the quantity demanded falls.
- ◆ In addition to price, other determinants of quantity demanded include income, tastes, expectations, and the prices of complements and substitutes.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Summary

- ◆ The supply curve shows how the quantity of a good supplied depends upon the price.
- ◆ According to the law of supply, as the price of a good rises, the quantity supplied rises.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Summary

- ◆ In addition to price, other determinants of quantity supplied include input prices, technology, and expectations.
- ◆ Market equilibrium is determined by the intersection of the supply and demand curves.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Summary

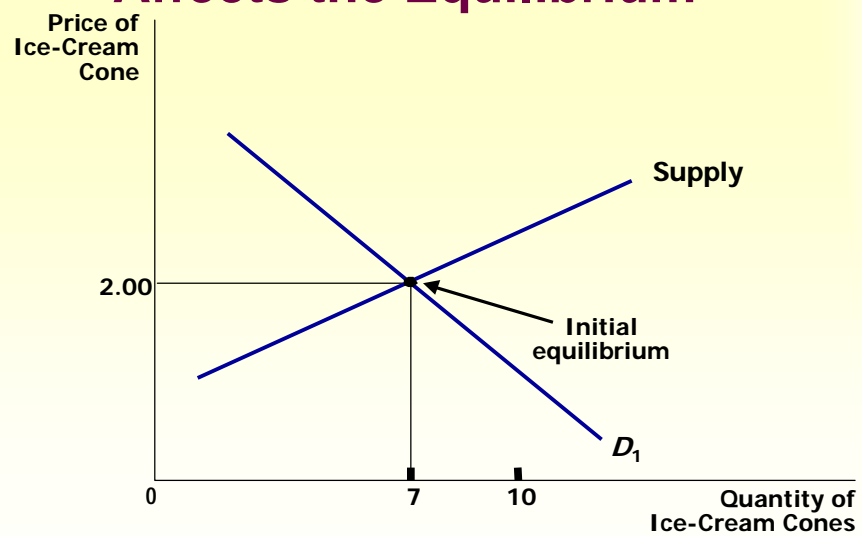
- ◆ Supply and demand together determine the prices of the economy's goods and services.
- ◆ In market economies, prices are the signals that guide the allocation of resources.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Graphical Review

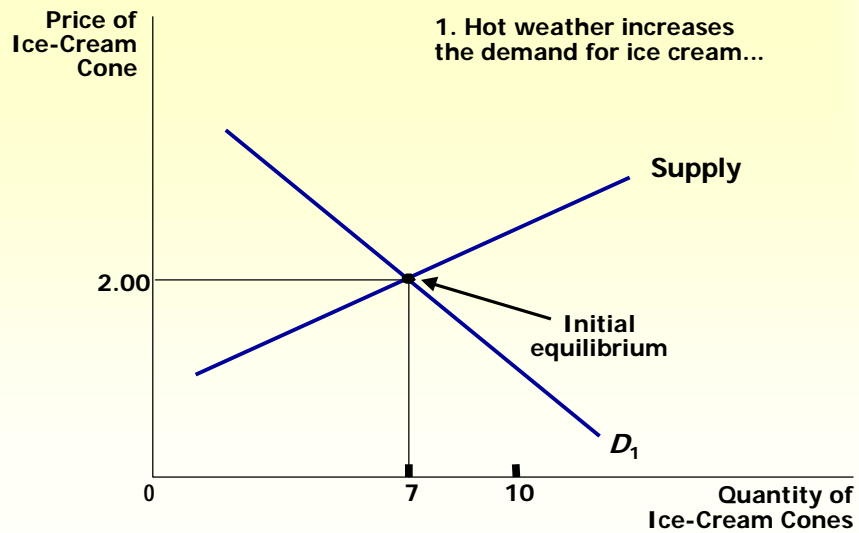
Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

How an Increase in Demand Affects the Equilibrium

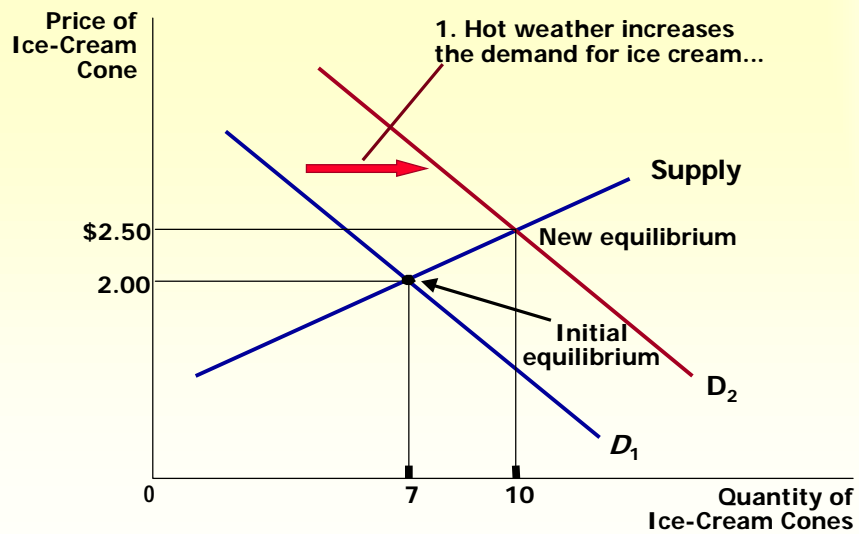


Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

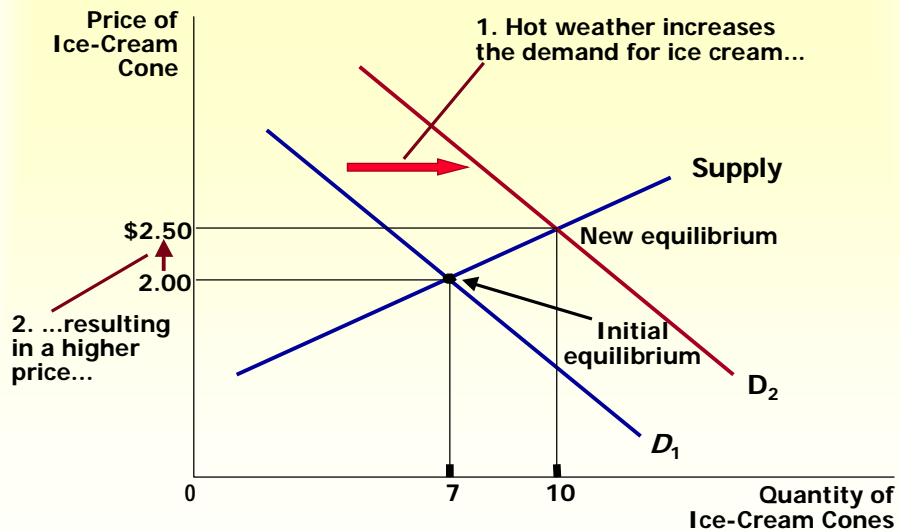
How an Increase in Demand Affects the Equilibrium



How an Increase in Demand Affects the Equilibrium



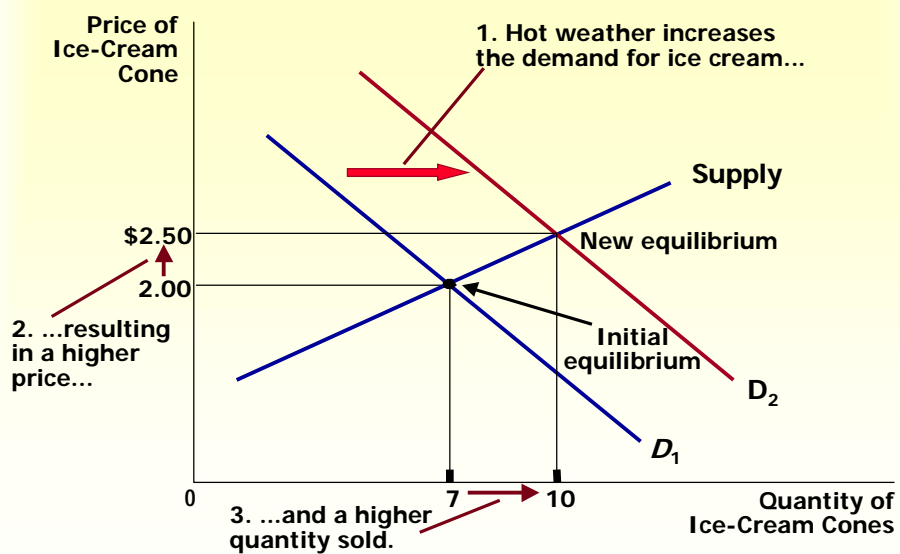
How an Increase in Demand Affects the Equilibrium



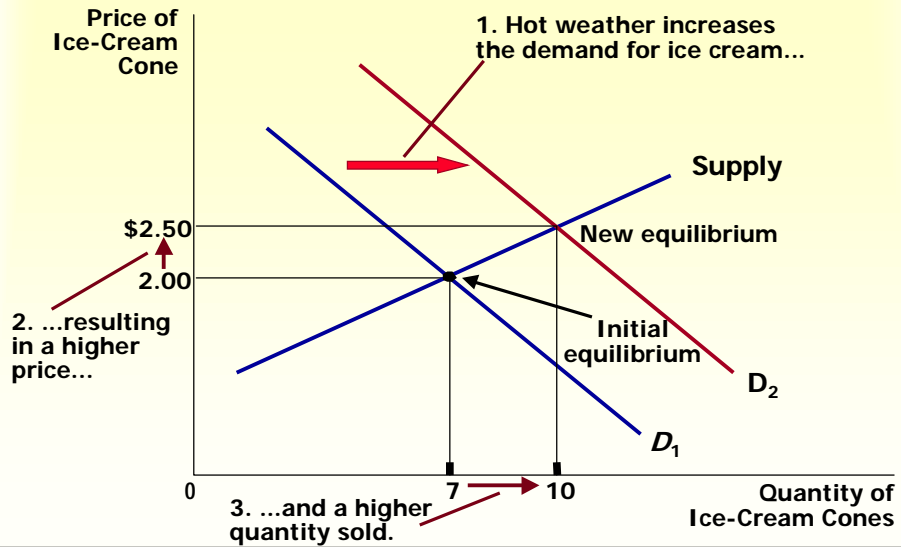
Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

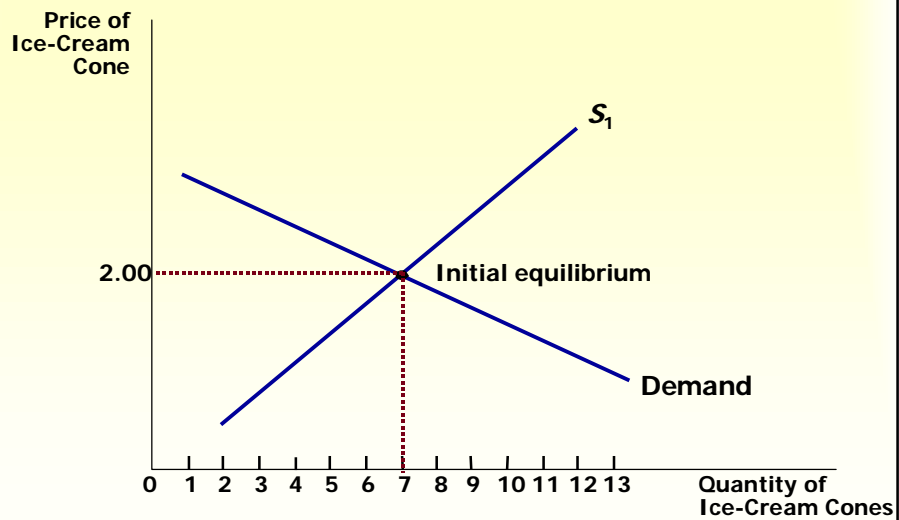
How an Increase in Demand Affects the Equilibrium



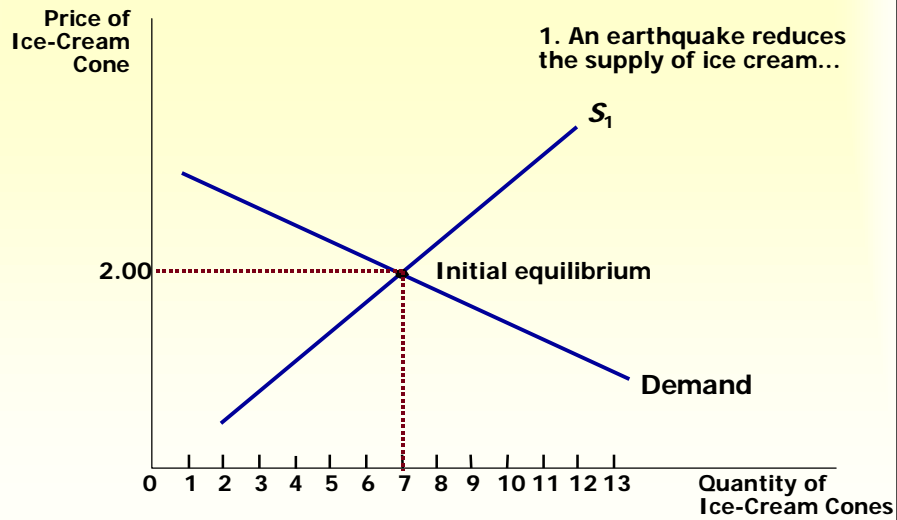
How an Increase in Demand Affects the Equilibrium



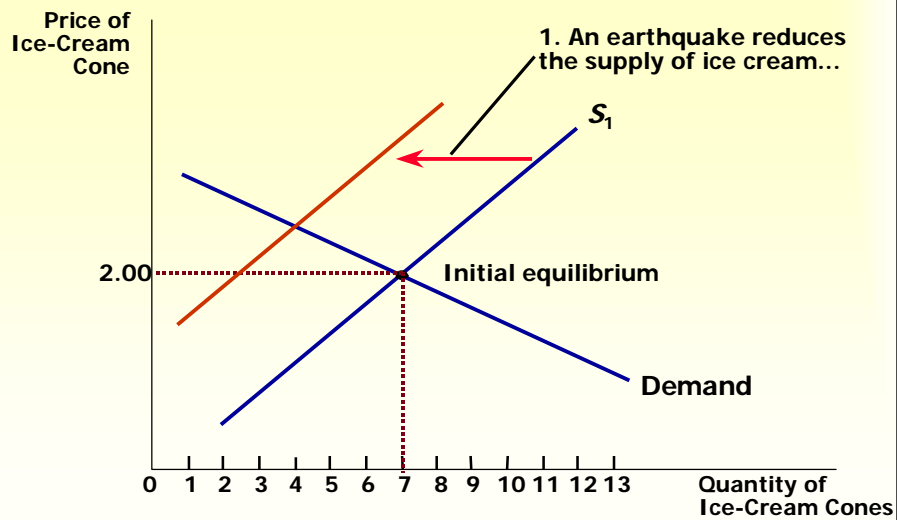
How a Decrease in Supply Affects the Equilibrium



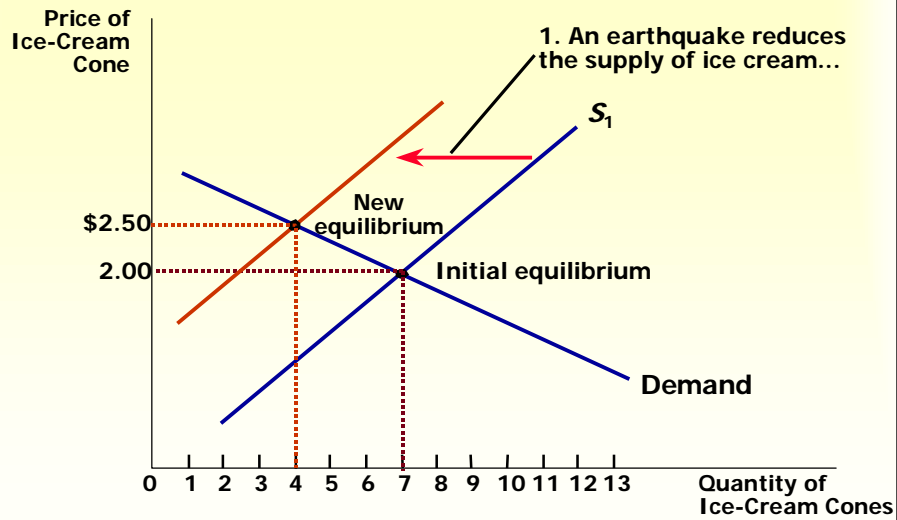
How a Decrease in Supply Affects the Equilibrium



How a Decrease in Supply Affects the Equilibrium

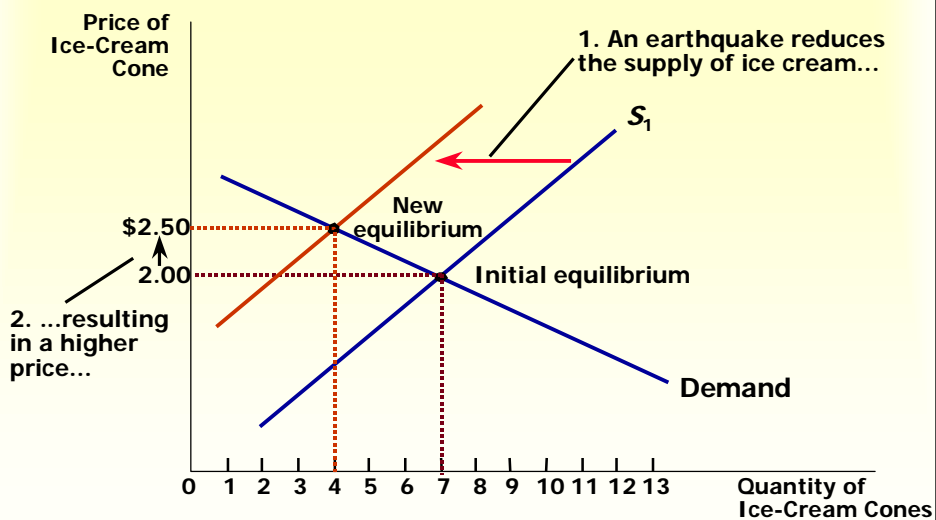


How a Decrease in Supply Affects the Equilibrium



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

How a Decrease in Supply Affects the Equilibrium



Harcourt, Inc. items and derived items copyright © 2001 by Harcourt, Inc.

How a Decrease in Supply Affects the Equilibrium

