Concept of Demand and Supply in Economics

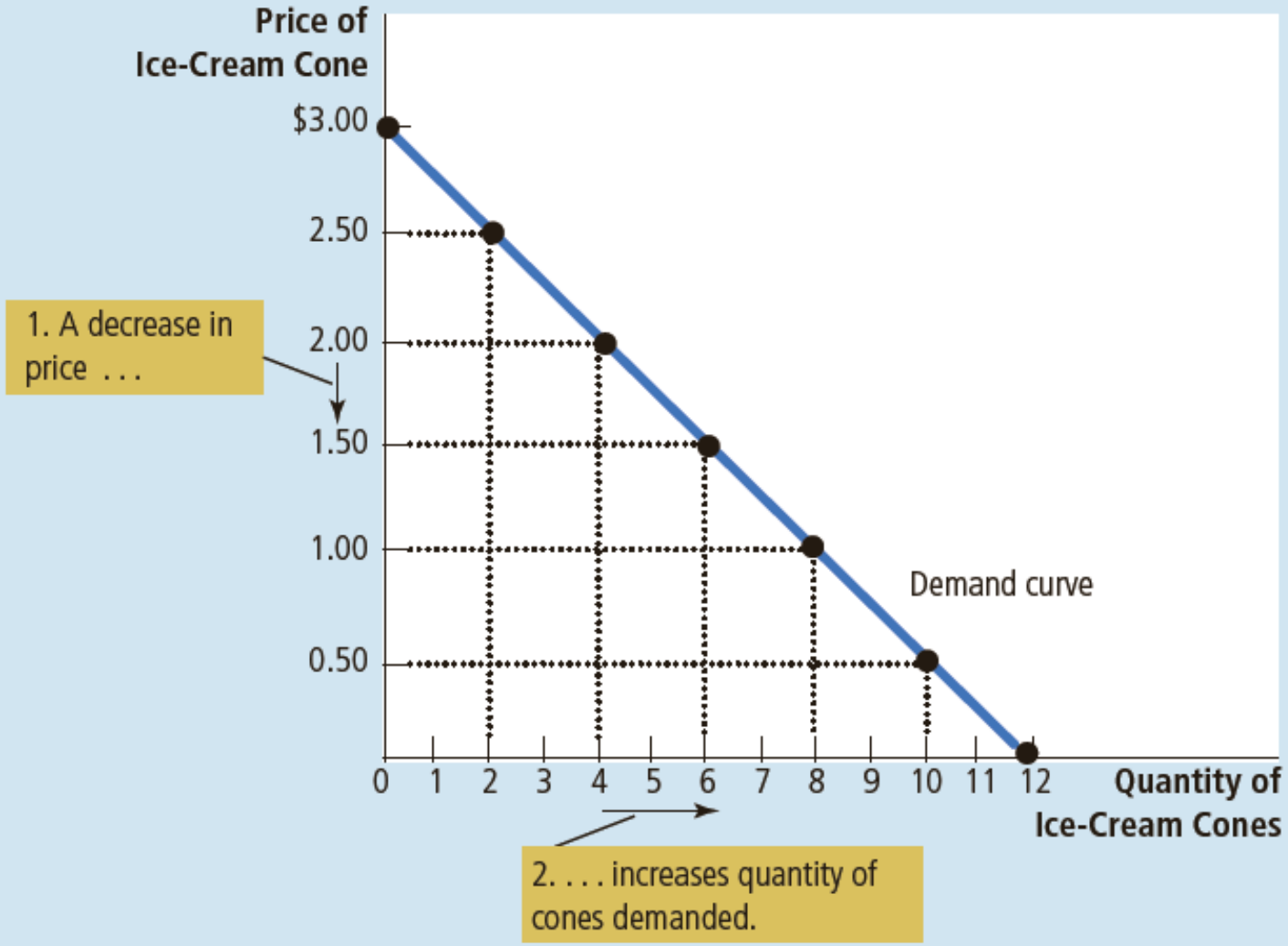
by Abdhut Deheri

Law of Demand

- The **quantity demanded** of any good is the amount of the good that buyers are willing and able to purchase.
- Other things being equal, the quantity demanded of a good falls when the price of the good rises: Law of Demand
- Demand curve: a graph of the relationship between the price of a good and the quantity demanded

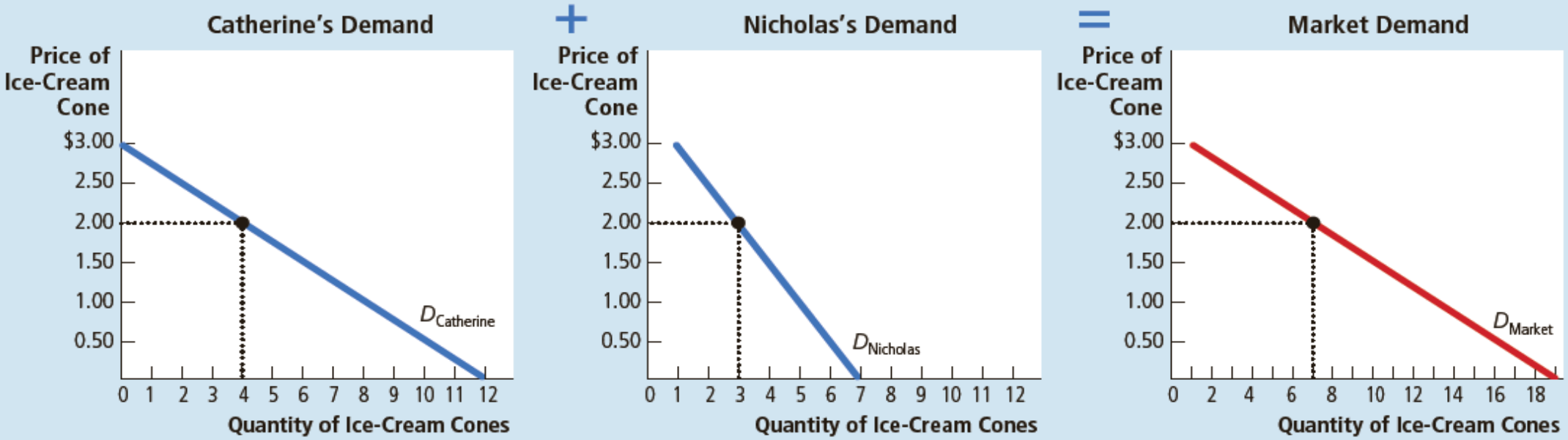
Demand Curve

Price of Ice-Cream Cone	Quantity of Cones Demanded
$0.00	12 cones
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0



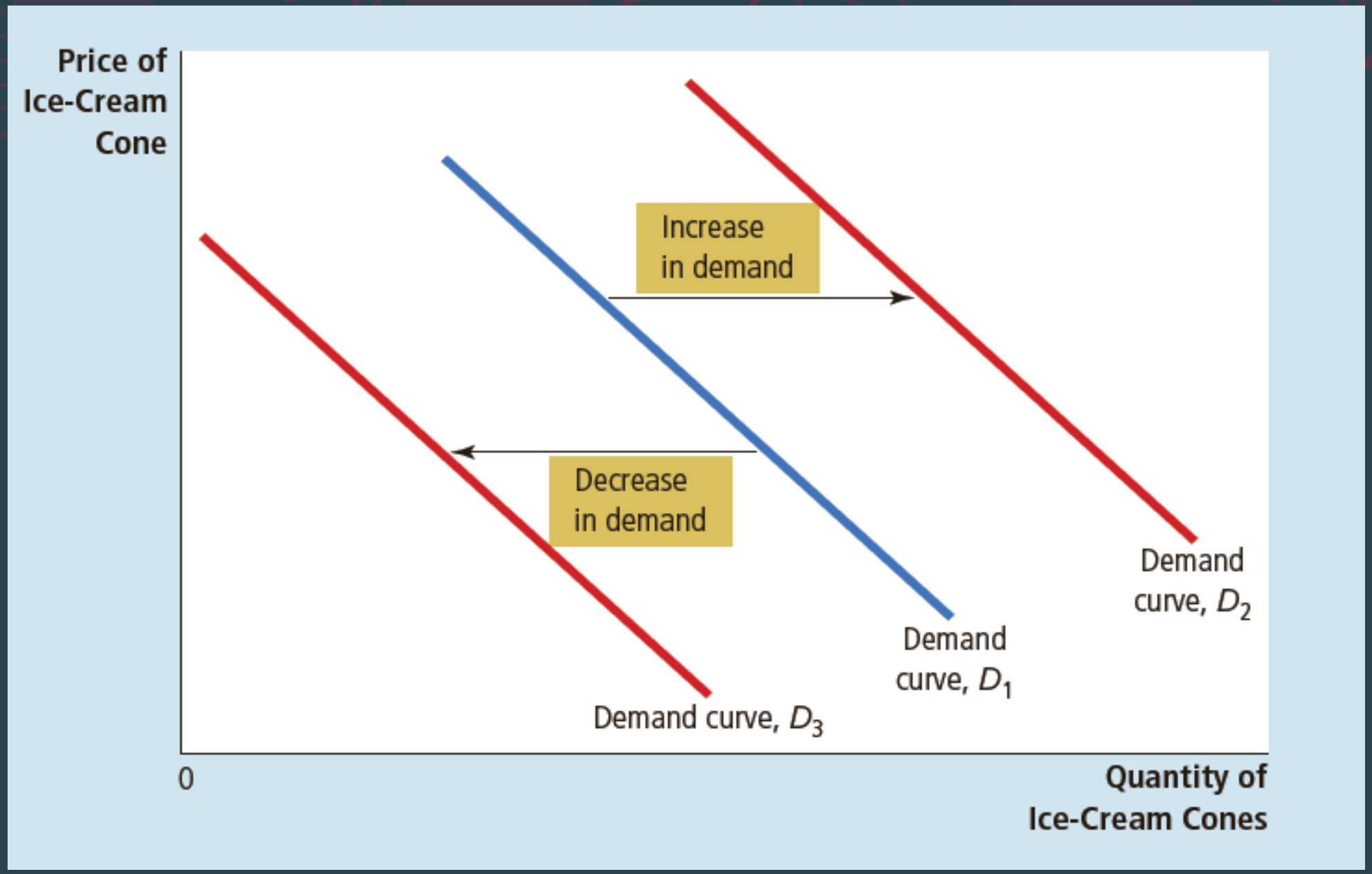
Market demand

Price of Ice-Cream Cone	Catherine		Nicholas		Market
$0.00	12	+	7	=	19 cones
0.50	10		6		16
1.00	8		5		13
1.50	6		4		10
2.00	4		3		7
2.50	2		2		4
3.00	0		1		1



Shift in Demand Curve

- 1. Income:
- Normal good: A good for which, other things being equal, an increase in income leads to an increase in demand
- Inferior good: A good for which, other things being equal, an increase in income leads to a decrease in demand

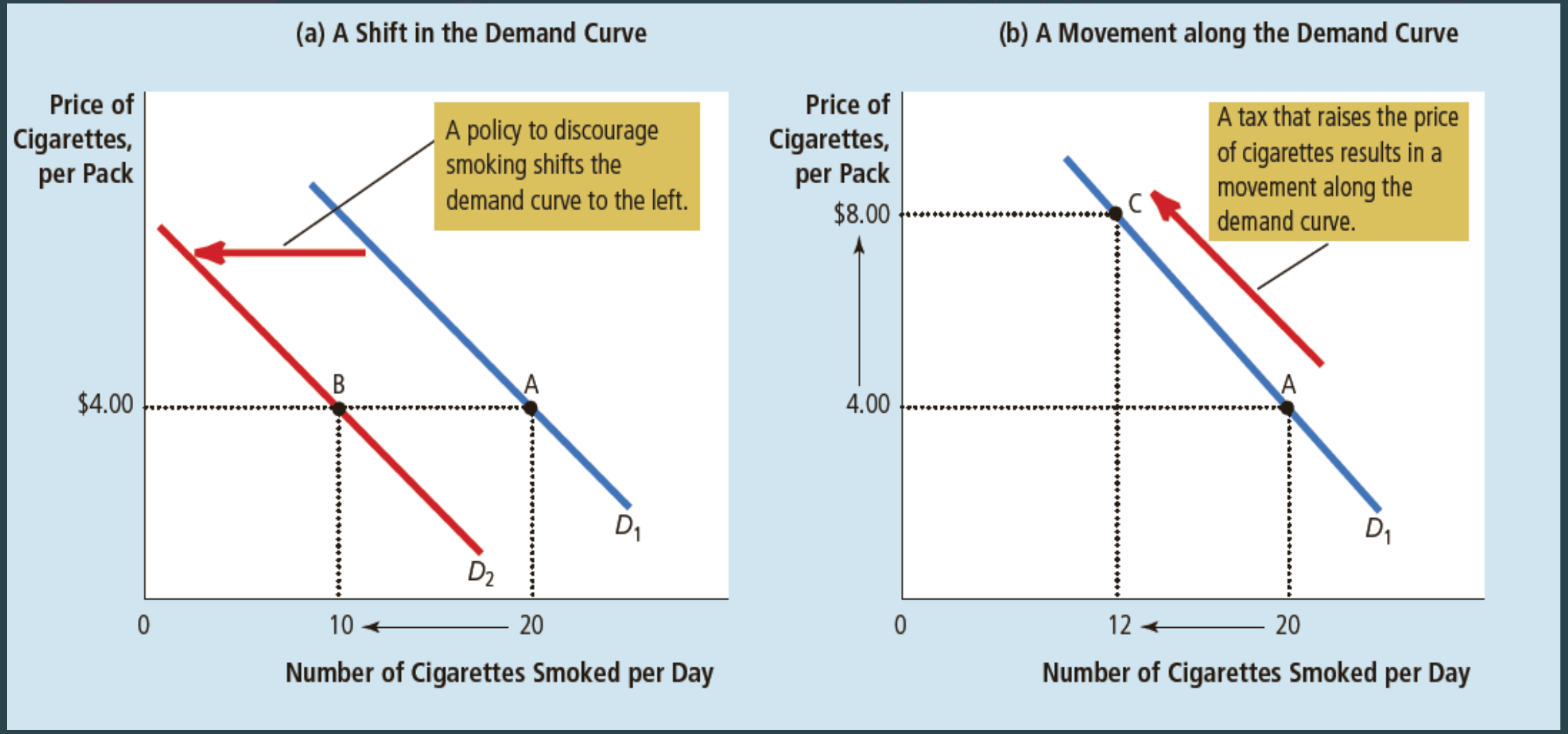

Price of Ice-Cream Cone
Increase in demand
Decrease in demand
Demand curve, D_2
Demand curve, D_1
Demand curve, D_3
0
Quantity of Ice-Cream Cones

- 2. Price of related goods: Substitutes and Complements
- Substitutes: Two goods for which an increase in the price of one leads to an increase in the demand for the other.
- Complements: When a fall in the price of one good raises the demand for another good, the two goods are called **complements**. Complements are often pairs of goods that are used together, such as gasoline and automobiles, computers and software, and peanut butter and jelly.

- **Tastes :** The most obvious determinant of your demand is your tastes. If you like ice cream, you buy more of it.
- **Expectations:** Your expectations about the future may affect your demand for a good or service today. If you expect to earn a higher income next month, you may choose to save less now and spend more of your current income buying ice cream. If you expect the price of ice cream to fall tomorrow, you may be less willing to buy an ice-cream cone at today's price.
- **Number of Buyers:** In addition to the preceding factors, which influence the behavior of individual buyers, market demand depends on the number of these buyers.

Variable	A Change in This Variable . . .
Price of the good itself	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

Shift vs Movement: Demand Curve



Exceptions to Law of Demand: Giffen and Veblen Goods

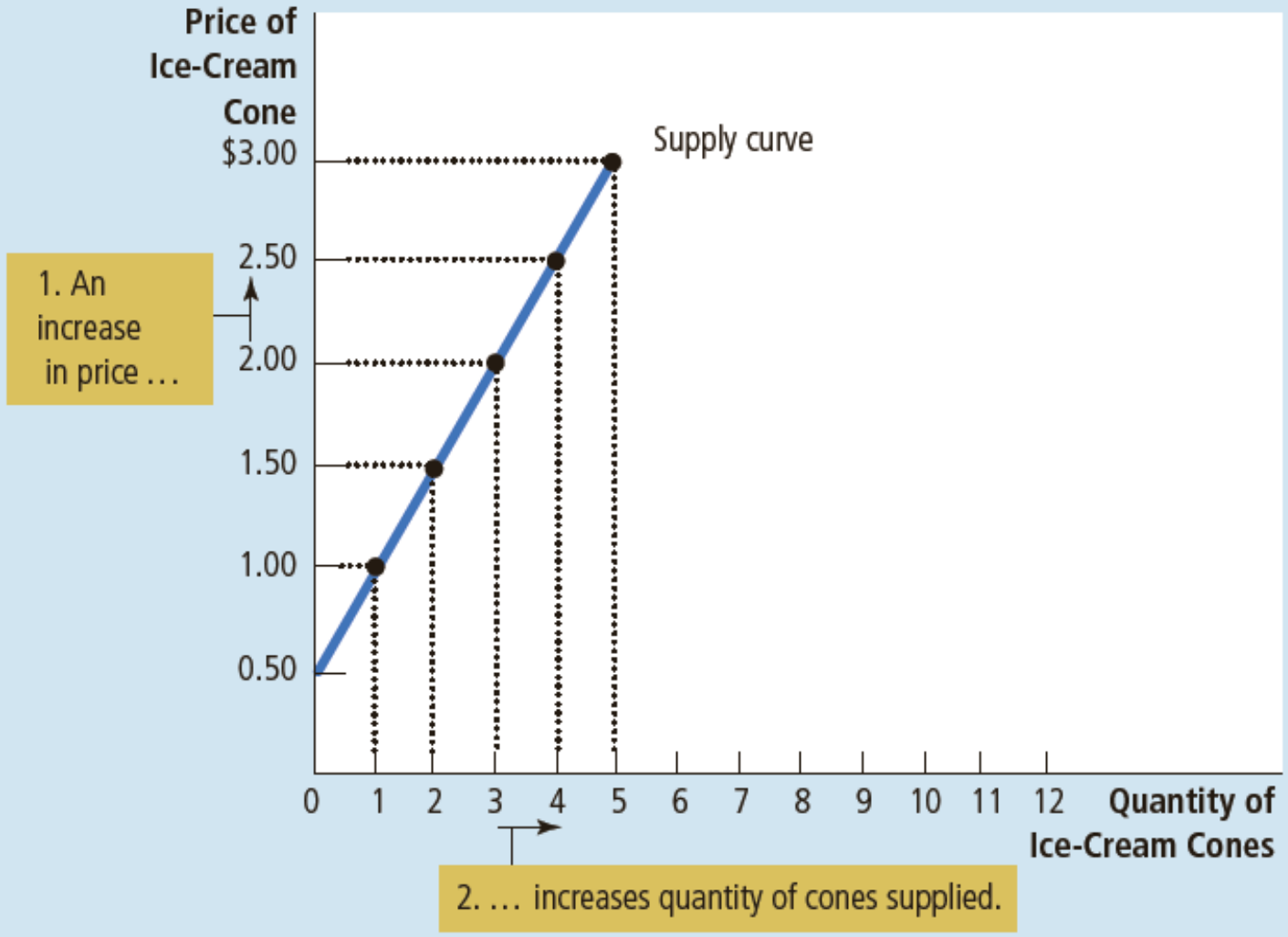
- Giffen Goods is a concept that was introduced by Sir Robert Giffen. These goods are goods that are inferior in comparison to luxury goods. However, the unique characteristic of Giffen goods is that as its price increases, the demand also increases. And this feature is what makes it an exception to the law of demand.
- Veblen Goods is a concept that is named after the economist Thorstein Veblen, who introduced the theory of “conspicuous consumption“. According to Veblen, there are certain goods that become more valuable as their price increases. If a product is expensive, then its value and utility are perceived to be more, and hence the demand for that product increases.
- Other exceptions: **The expectation of Price Change, Necessary Goods and Services, and Change in Income**

Concept of Supply

- Quantity supplied: the amount of a good that sellers are willing and able to sell.
- Law of supply: Other things being equal, the quantity supplied of a good rises when the price of the good rises

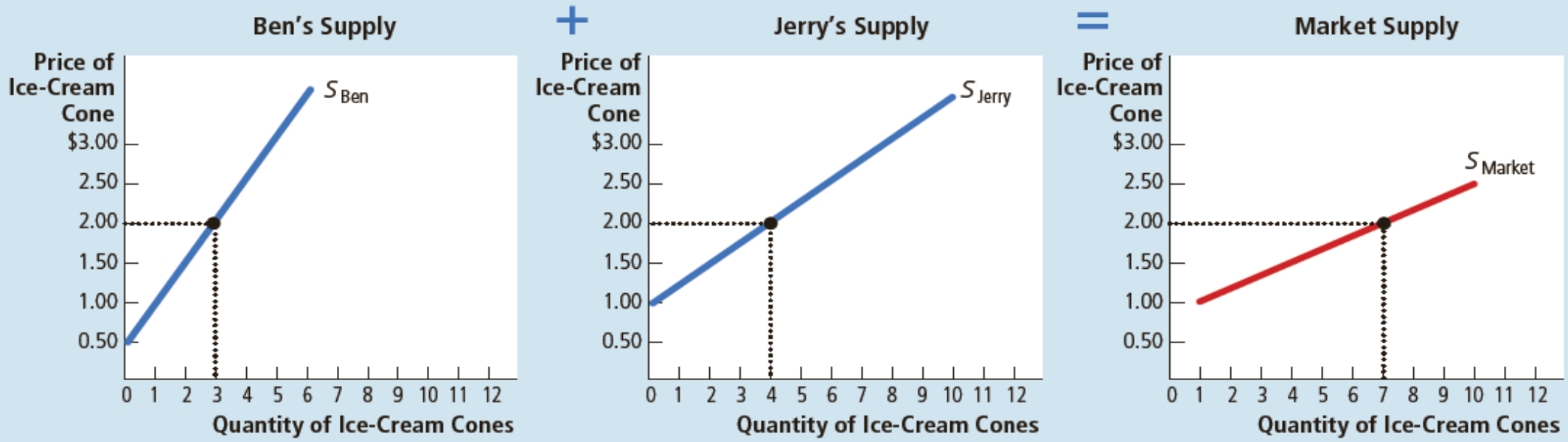
Supply Curve

Price of Ice-Cream Cone	Quantity of Cones Demanded
$0.00	0 cones
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5

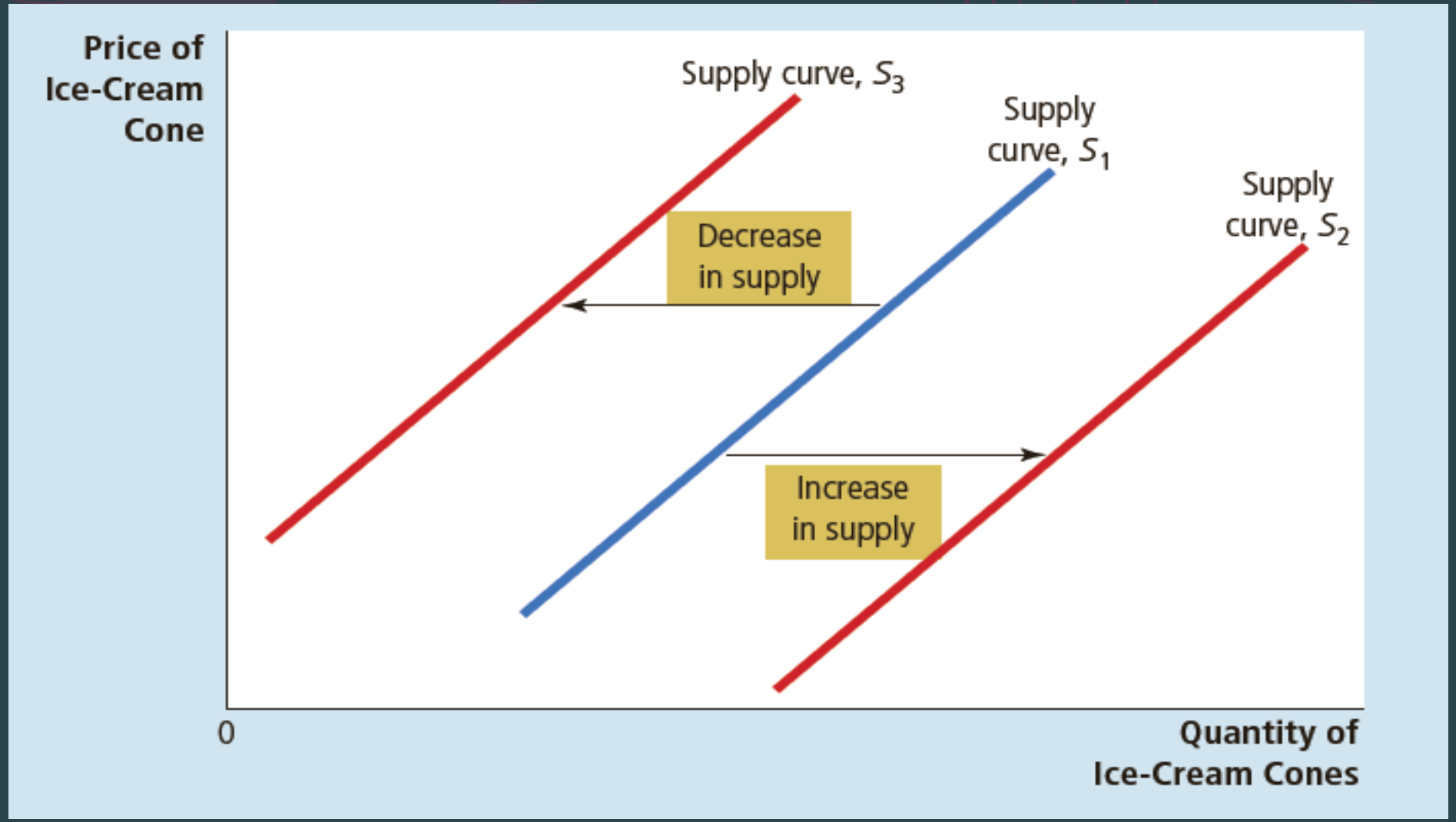


Market Supply versus Individual Supply

Price of Ice-Cream Cone	Ben		Jerry		Market
$0.00	0	+	0	=	0 cones
0.50	0		0		0
1.00	1		0		1
1.50	2		2		4
2.00	3		4		7
2.50	4		6		10
3.00	5		8		13



Shifts in Supply Curve



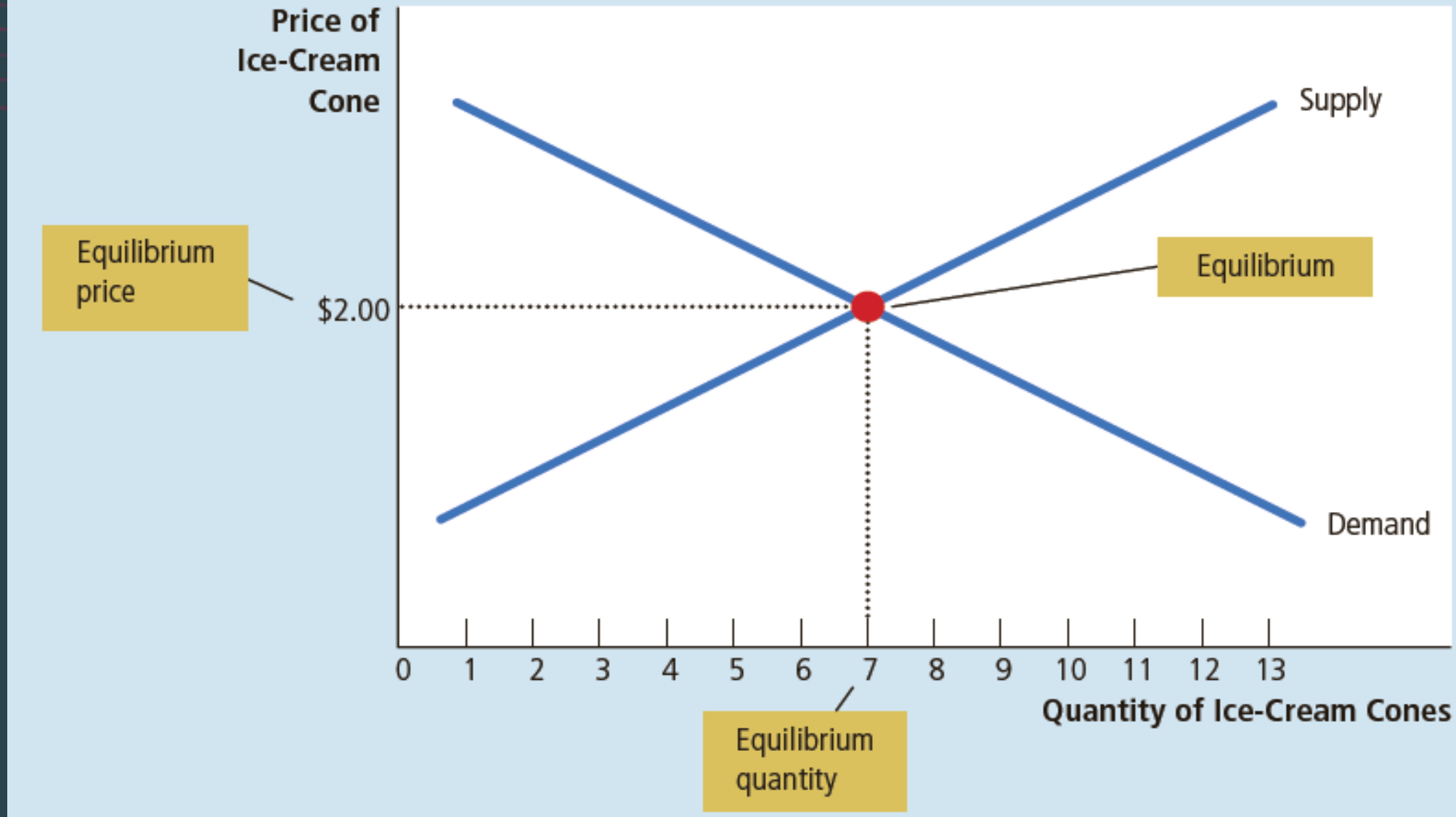
Causes of Shift in Supply Curve:

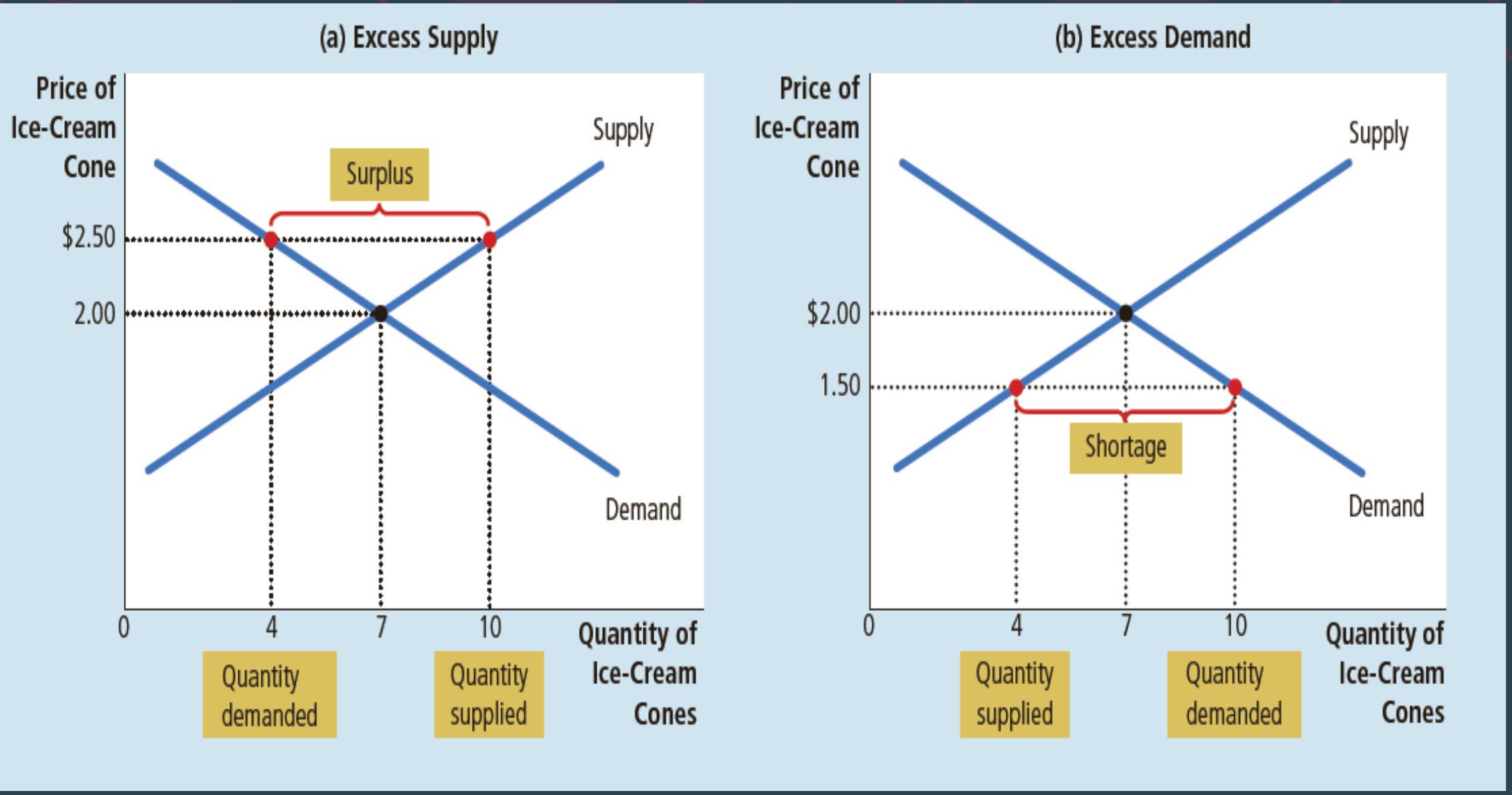
- **Input Prices:** When the price of one or more of these inputs rises, producing ice cream is less profitable, and firms supply less ice cream. If input prices rise substantially, a firm might shut down and supply no ice cream at all. Thus, the supply of a good is negatively related to the price of the inputs used to make the good.
- **Technology:** The invention of the mechanized ice-cream machine, for example, reduced the amount of labor necessary to make ice cream. By reducing firms' costs, the advance in technology raised the supply of ice cream.
- **Expectations:** If a firm expects the price of ice cream to rise in the future, it will put some of its current production into storage and supply less to the market today.
- **Number of Sellers:** If Rakesh or Rajesh were to retire from the ice-cream business, the supply in the market would fall.

Variable	A Change in This Variable . . .
Price of the good itself	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

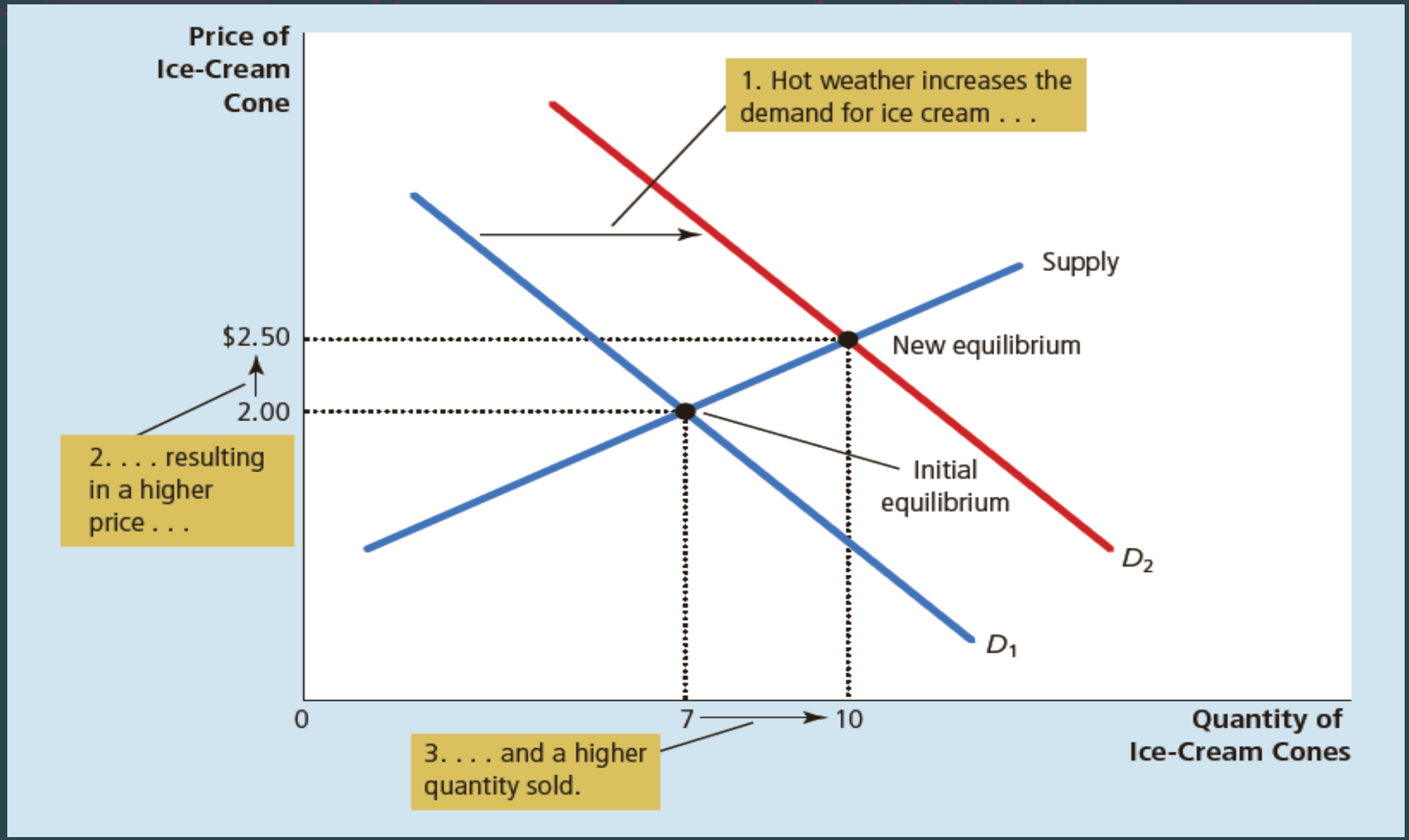
Equilibrium

- Equilibrium: A situation in which the market price has reached the level at which quantity supplied equals quantity demanded.
- Equilibrium price: The price that balances quantity supplied, and quantity demanded
- Equilibrium quantity: The quantity supplied, and the quantity demanded at the equilibrium price

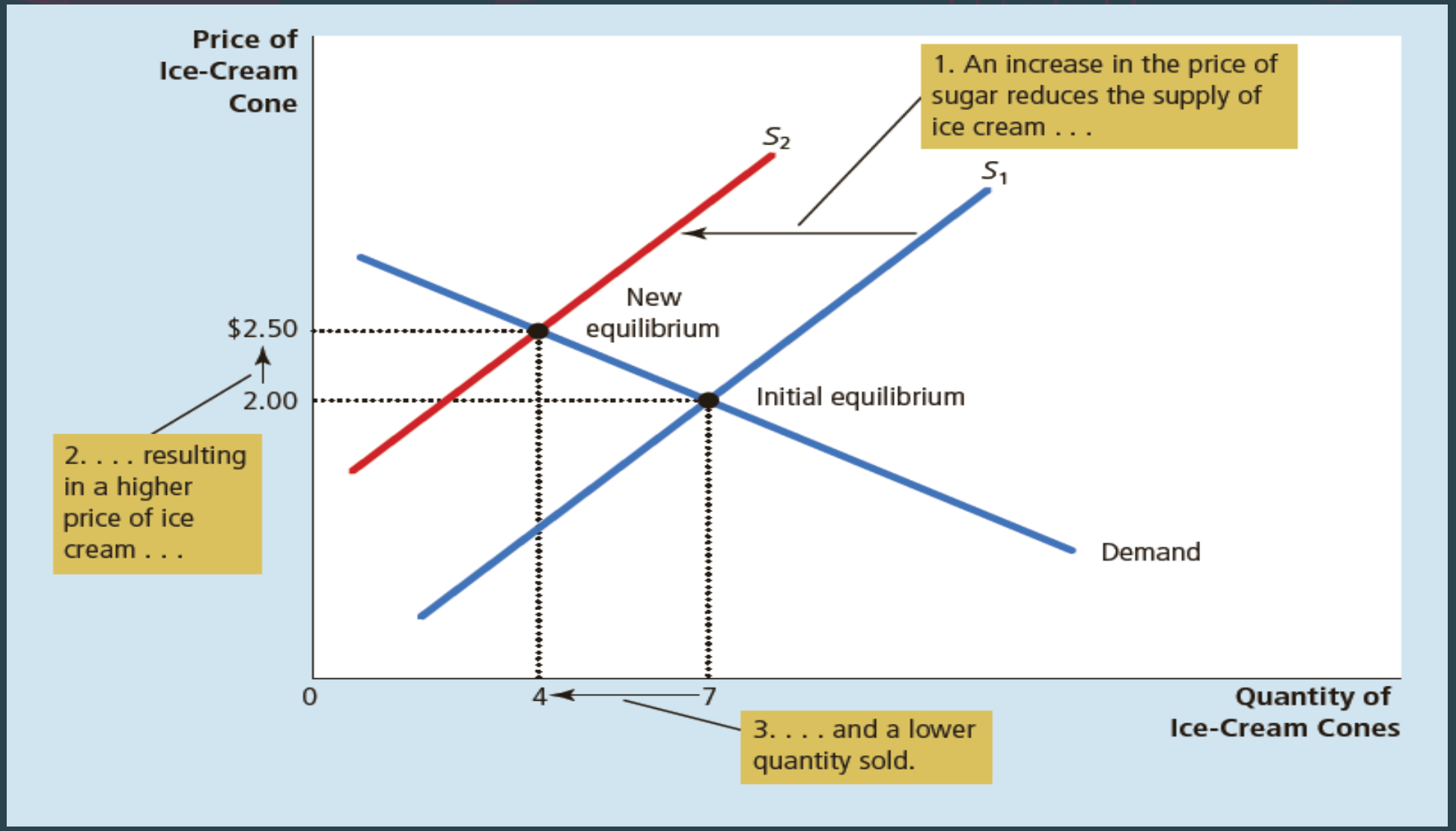

Price of Ice-Cream Cone
Supply
Equilibrium price
Equilibrium
$2.00
Demand
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Quantity of Ice-Cream Cones
Equilibrium quantity


(a) Excess Supply
Price of Ice-Cream Cone
Supply
Surplus
$2.50
2.00
Demand
0
4
7
10
Quantity of Ice-Cream Cones
Quantity demanded
Quantity supplied
(b) Excess Demand
Price of Ice-Cream Cone
Supply
$2.00
1.50
Shortage
Demand
0
4
7
10
Quantity of Ice-Cream Cones
Quantity supplied
Quantity demanded

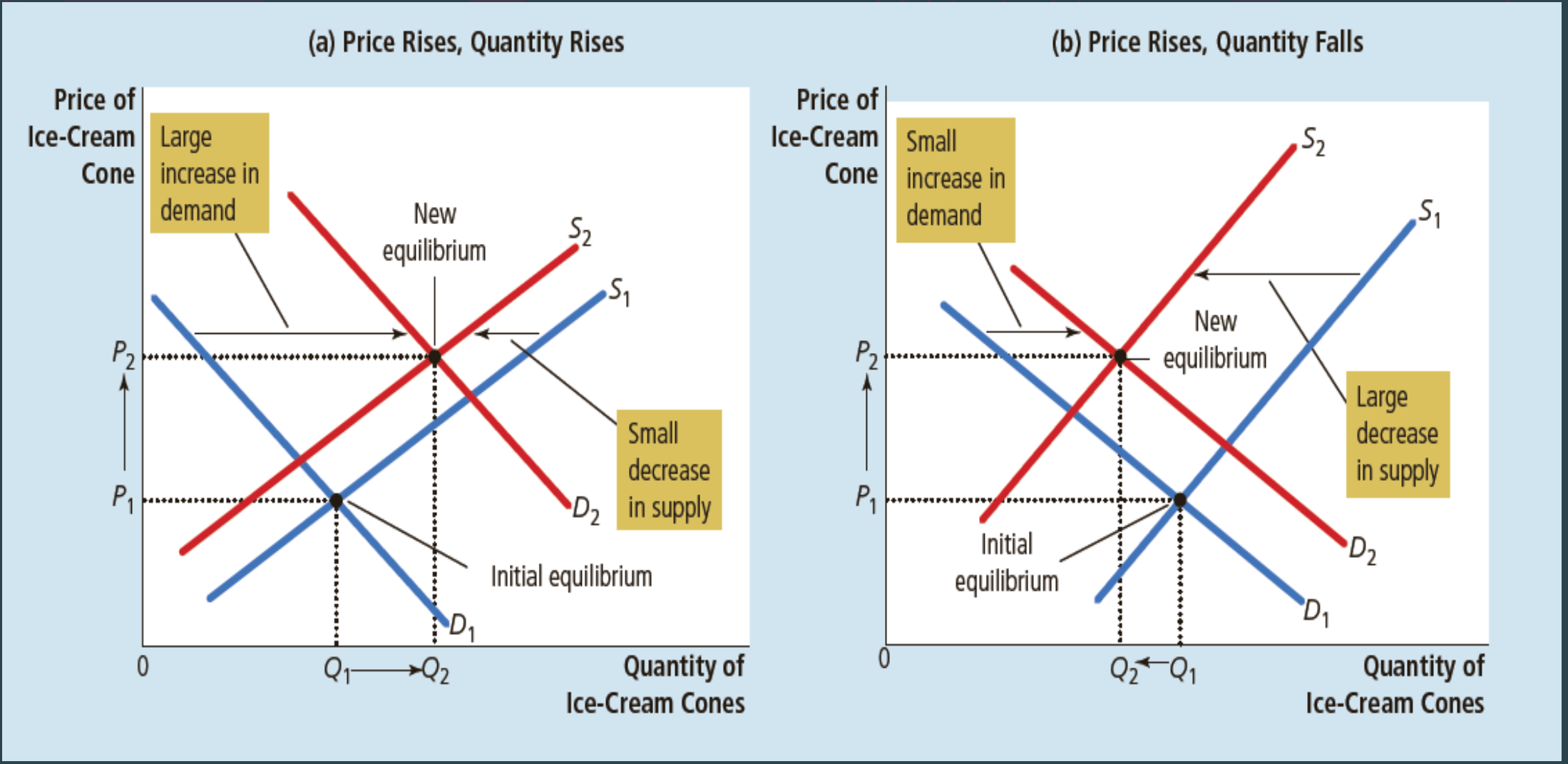
Shift in Demand Curve:



Shift in Supply Curve:



Shift in Demand and Supply Curve:



- To summarize, a shift *in* the supply curve is called a "change in supply," and a shift *in* the demand curve is called a "change in demand." A movement *along* a fixed supply curve is called a "change in the quantity supplied," and a movement *along* a fixed demand curve is called a "change in the quantity demanded."

	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

Problems and Solutions

Question:
Demand Equation : Qd = 600 - 2 P
Supply Equation: Qs = 3 P
Find out the equilibrium price and Output.

Answer:
Quantity demanded = Quantity supplied
600 - 2 P = 3 P
600 = 5 P

Equilibrium price = 120
Equilibrium output=360

Increase in Demand

- Question:
- Qd = 1200 - 2 P
  Qs = 3 P
- Answer:
- **1200 - 2 P = 3 P**
- **1200 = 5 P**
- **Equilibrium price = 240**
- **Equilbrium quantity = 3 (240) = 720**

- **Question:**

  $Qd = 600 - 2P$

  $Qs = 4P$

Any Questions?