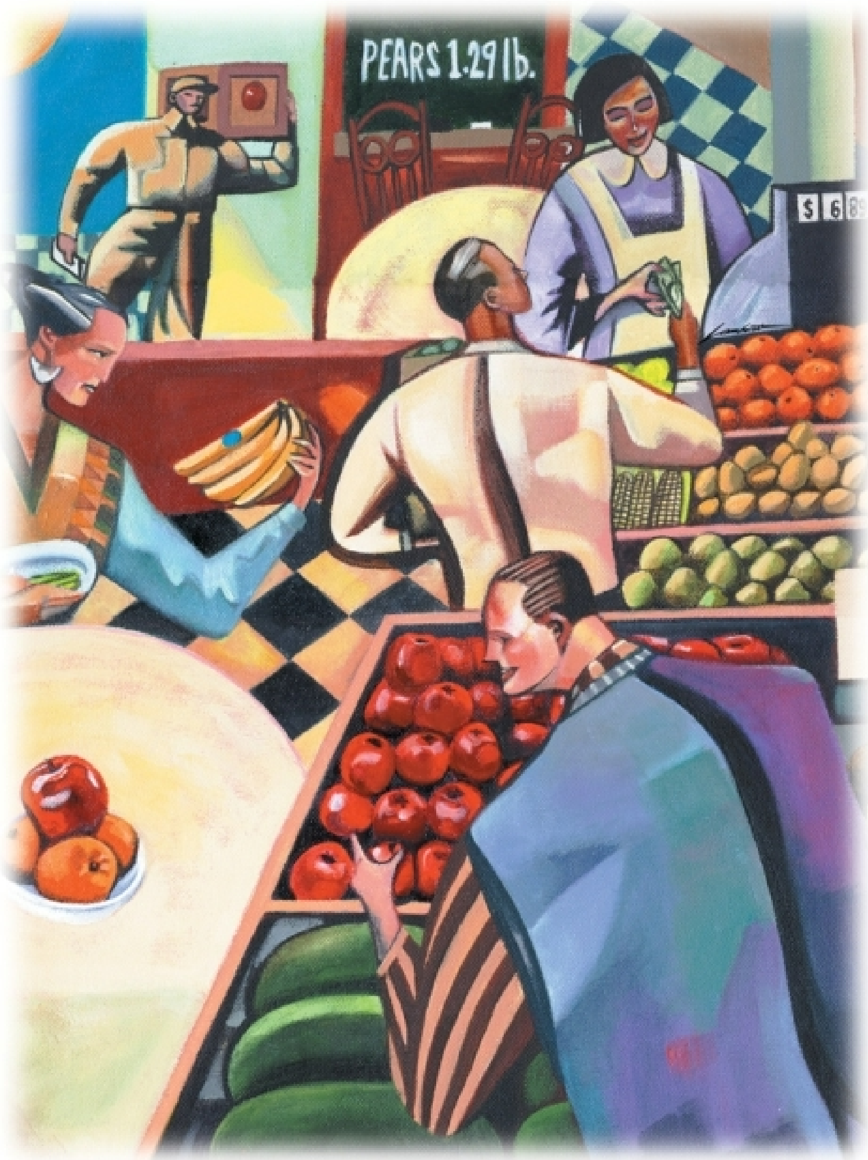


Topic 2

Supply and Demand I:

How Markets Work

In this chapter you will…

- Learn the nature of a competitive market.
- Examine what determines the demand for a good in a competitive market.
- Examine what determines the supply of a good in a competitive market.
- See how supply and demand together set the price of a good and the quantity sold.
- Consider the key role of prices in allocating scarce resources.

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.**

MARKETS AND COMPETITION

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

DEMAND

- ***Quantity Demanded*** **refers to the *amount* (quantity) of a good that *buyers are willing* to purchase at alternative prices for a given period.**

Determinants of Demand

- **What factors determine how much ice cream you will buy?**
- **What factors determine how much you will really purchase?**

1) ***Product's Own Price***
2) ***Consumer Income***
3) ***Prices of Related Goods***
4) ***Preferences/Expectations***
5) ***Tastes***

1) Price

Law of Demand

- The ***law of demand*** states that, other things equal, the quantity demanded of a good falls when the price of the good rises.

2) Income

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

3) Prices of Related Goods

Prices of Related Goods

- **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*.**

4) Others

- Tastes
- Expectations

The Demand Schedule and the Demand Curve

- The *demand schedule* is a table that shows the relationship between the price of the good and the quantity demanded.
- The *demand curve* is a graph of the relationship between the price of a good and the quantity demanded.
- *Ceteris Paribus: "Other thing being equal"*

Table 4-1: Catherine's Demand Schedule

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

Figure 4-1: Catherine's Demand Curve

Market Demand Schedule

- Market demand is the ***sum of all individual demands*** at each possible price.
- Graphically, individual demand curves are summed horizontally to obtain the market demand curve.
- Assume the ice cream market has two buyers as follows…

Table 4-2: Market demand as the Sum of Individual Demands

Price of Ice-cream Cone ($)	Catherine		Nicholas		Market
0.00	12	+	7	=	19
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

Figure 4-3: Shifts in the Demand Curve

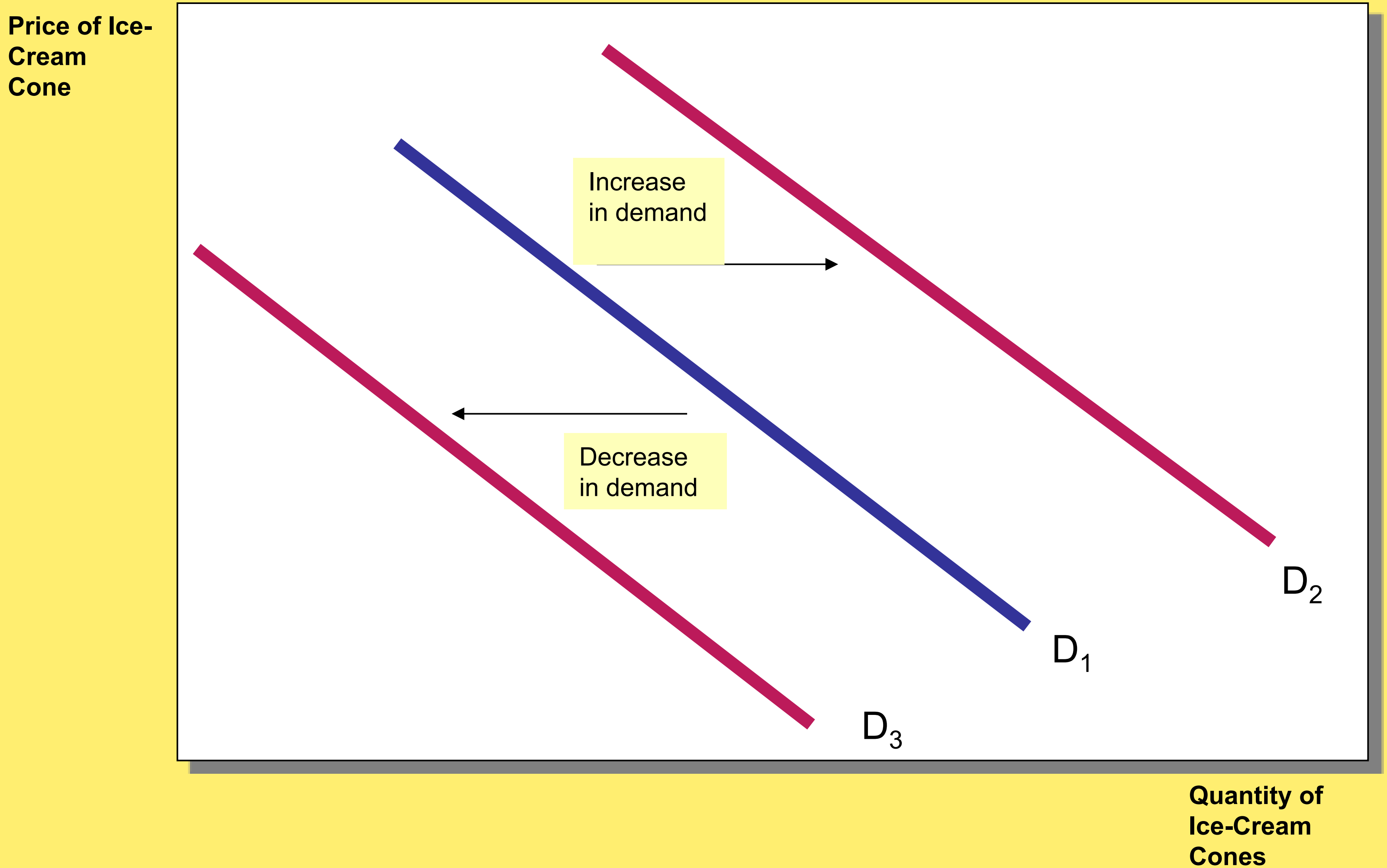


Table 4-3: The Determinants of Quantity Demanded

Shifts in the Demand Curve *versus* Movements Along the Demand Curve

Figure 4-4 a): A Shifts in the Demand Curve

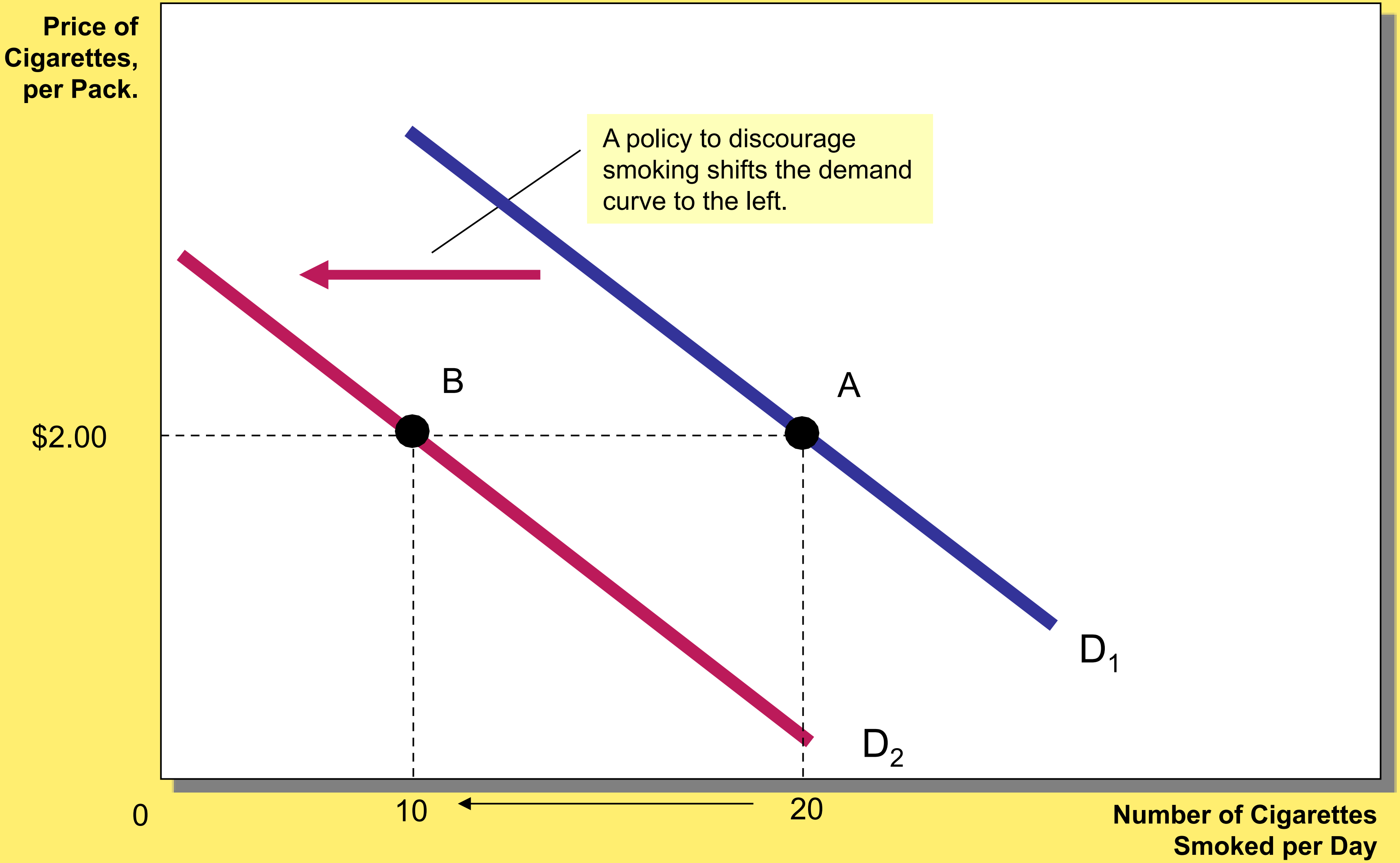
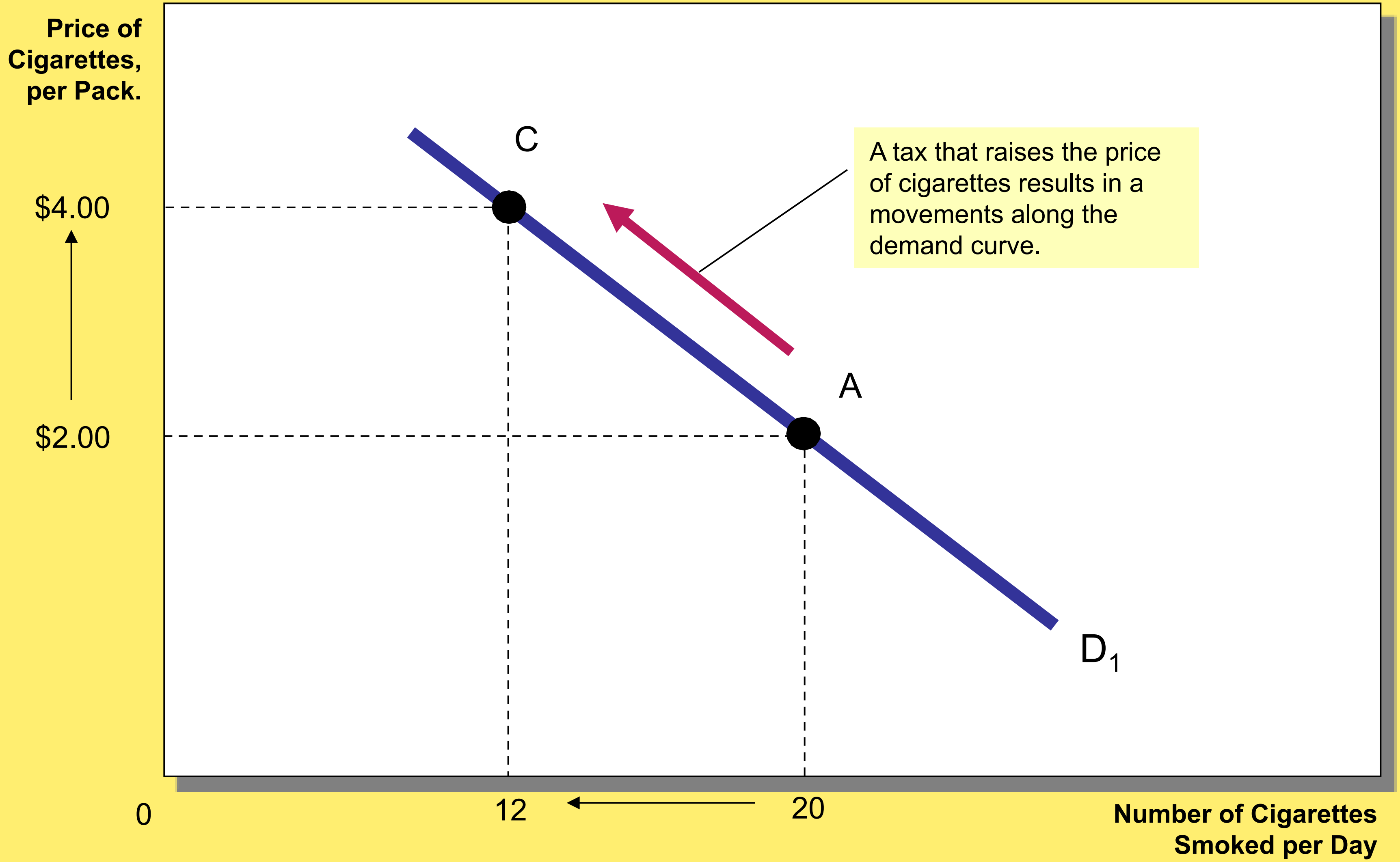


Figure 4-4 b): A Movement Along the Demand Curve



SUPPLY

- ***Quantity Supplied*** refers to the ***amount*** (quantity) of a good that ***sellers*** are ***willing*** to make available for sale at alternative prices for a given period.

Determinants of Supply

- What factors determine how much ice cream you are willing to offer or produce?

1) ***Product's Own Price***
2) ***Input prices***
3) ***Technology***
4) ***Expectations***
5) ***Number of sellers***

1) Price

Law of Supply

- The ***law of supply*** states that, other things equal, the quantity supplied of a good rises when the price of the good rises.

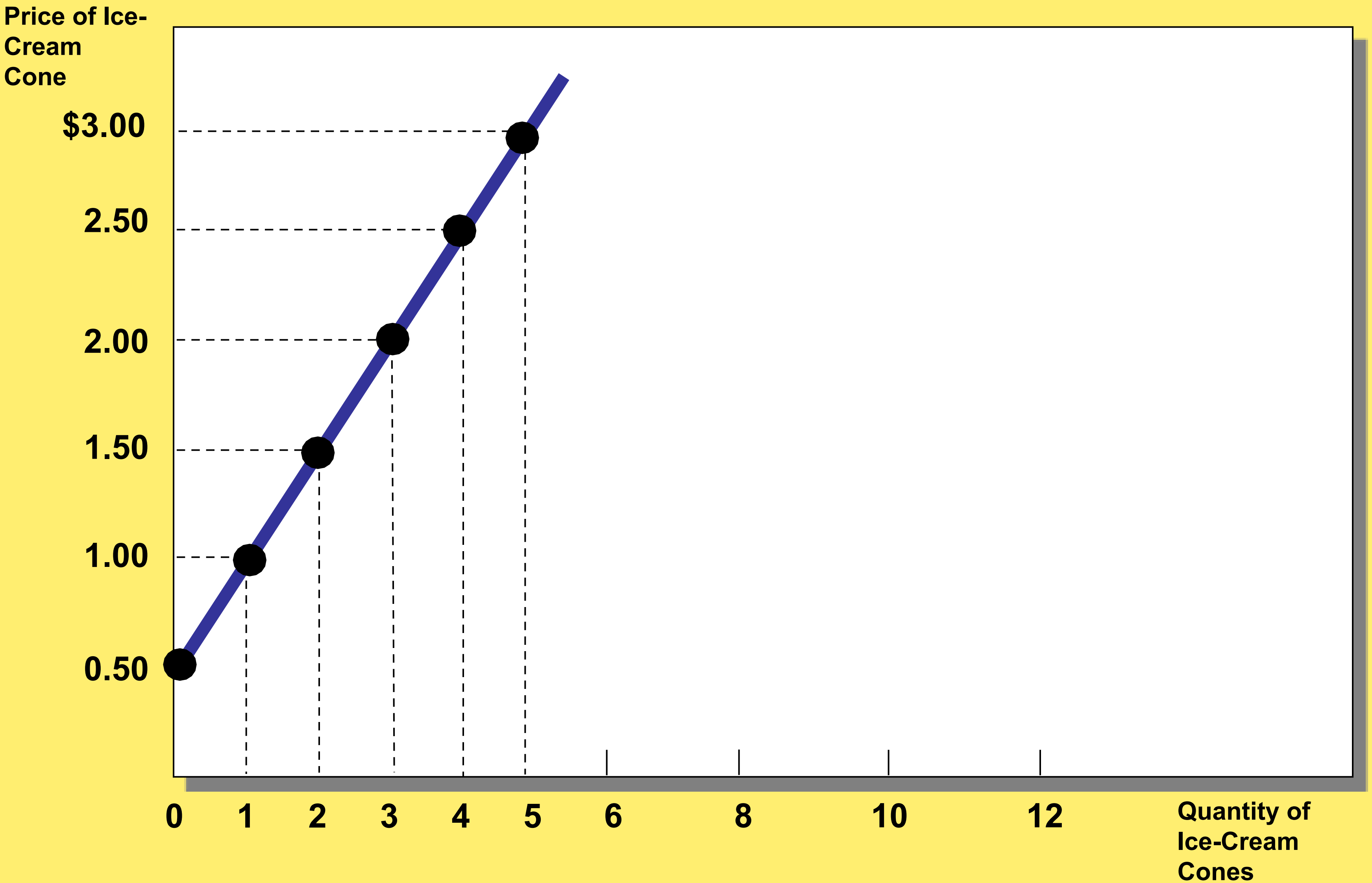
The Supply Schedule and the Supply Curve

- The *supply schedule* is a table that shows the relationship between the price of the good and the quantity supplied.
- The *supply curve* is a graph of the relationship between the price of a good and the quantity supplied.
- *Ceteris Paribus: "Other thing being equal"*

Table 4-4: Ben's Supply Schedule

Price of Ice-cream Cone ($)	Quantity of cones Supplied
0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5

Figure 4-5: Ben's Supply Curve



Market Supply Schedule

- Market supply is the *sum of all individual supplies* at each possible price.
- Graphically, individual supply curves are summed horizontally to obtain the market demand curve.
- Assume the ice cream market has two suppliers as follows…

Table 4-5: Market supply as the Sum of Individual Supplies

Price of Ice-cream Cone ($)	Ben		Nicholas		Market
0.00	0	+	0	=	0
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

Figure 4-7: Shifts in the Supply Curve

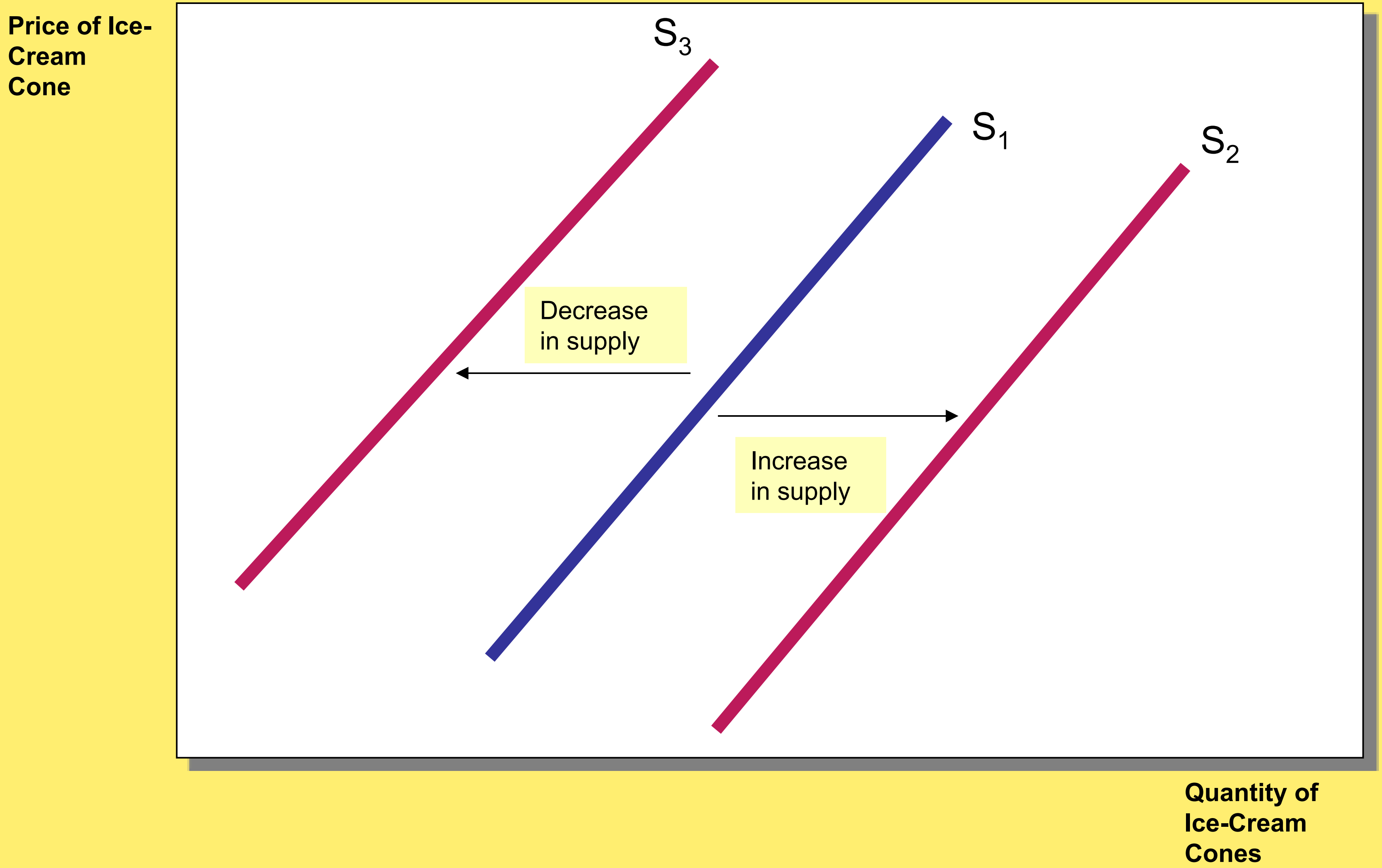


Table 4-6: The Determinants of Quantity Supplied

SUPPLY AND DEMAND TOGETHER

- ***Equilibrium*** **refers to a situation in which the price has reached the level where quantity supplied equals quantity demanded.**

Equilibrium

- ***Equilibrium Price***
  - The price that balances quantity supplied and quantity demanded.
  - On a graph, it is the price at which the supply and demand curves intersect.
- ***Equilibrium Quantity***
  - The quantity supplied and the quantity demanded at the equilibrium price.
  - On a graph it is the quantity at which the supply and demand curves intersect.

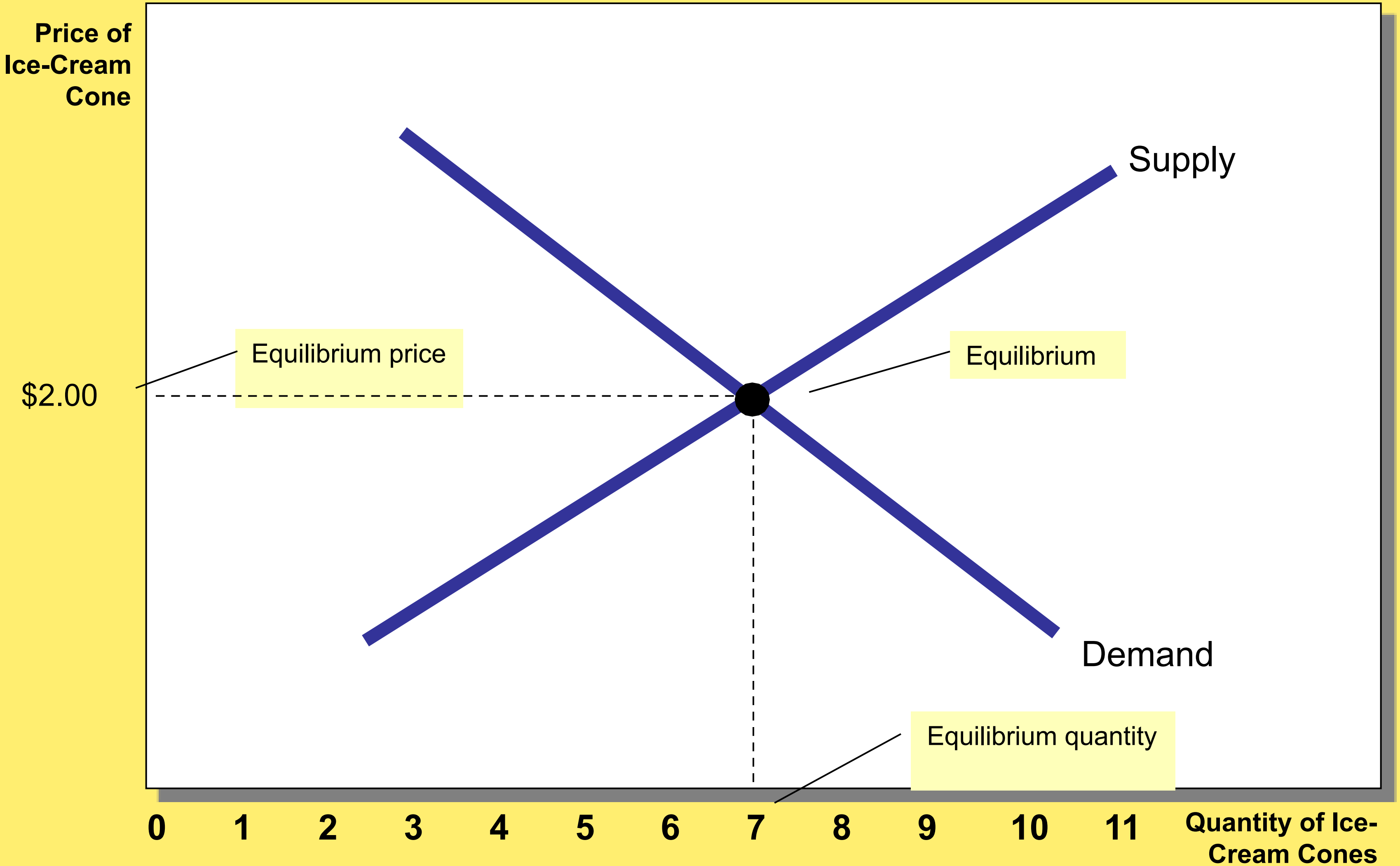
Equilibrium

Demand Schedule

Supply Schedule

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

Figure 4-8: The Equilibrium of Supply and Demand



Equilibrium

- *Surplus*
  - When price > equilibrium price, then quantity supplied > quantity demanded.
    - There is excess supply or a surplus.
    - Suppliers will lower the price to increase sales, thereby moving toward equilibrium.
- *Shortage*
  - When price < equilibrium price, then quantity demanded > 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.

Figure 4-9 a): Excess Supply

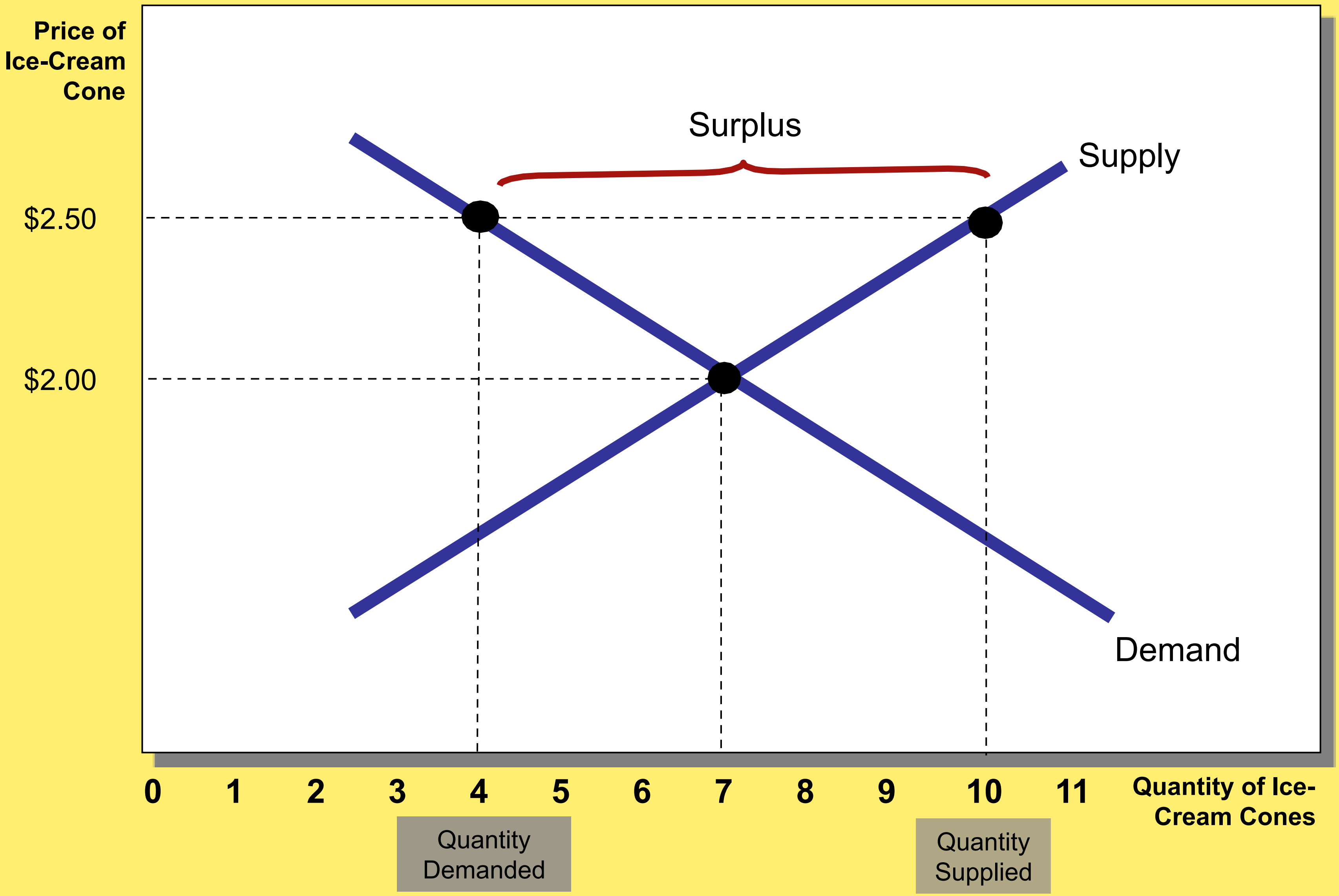
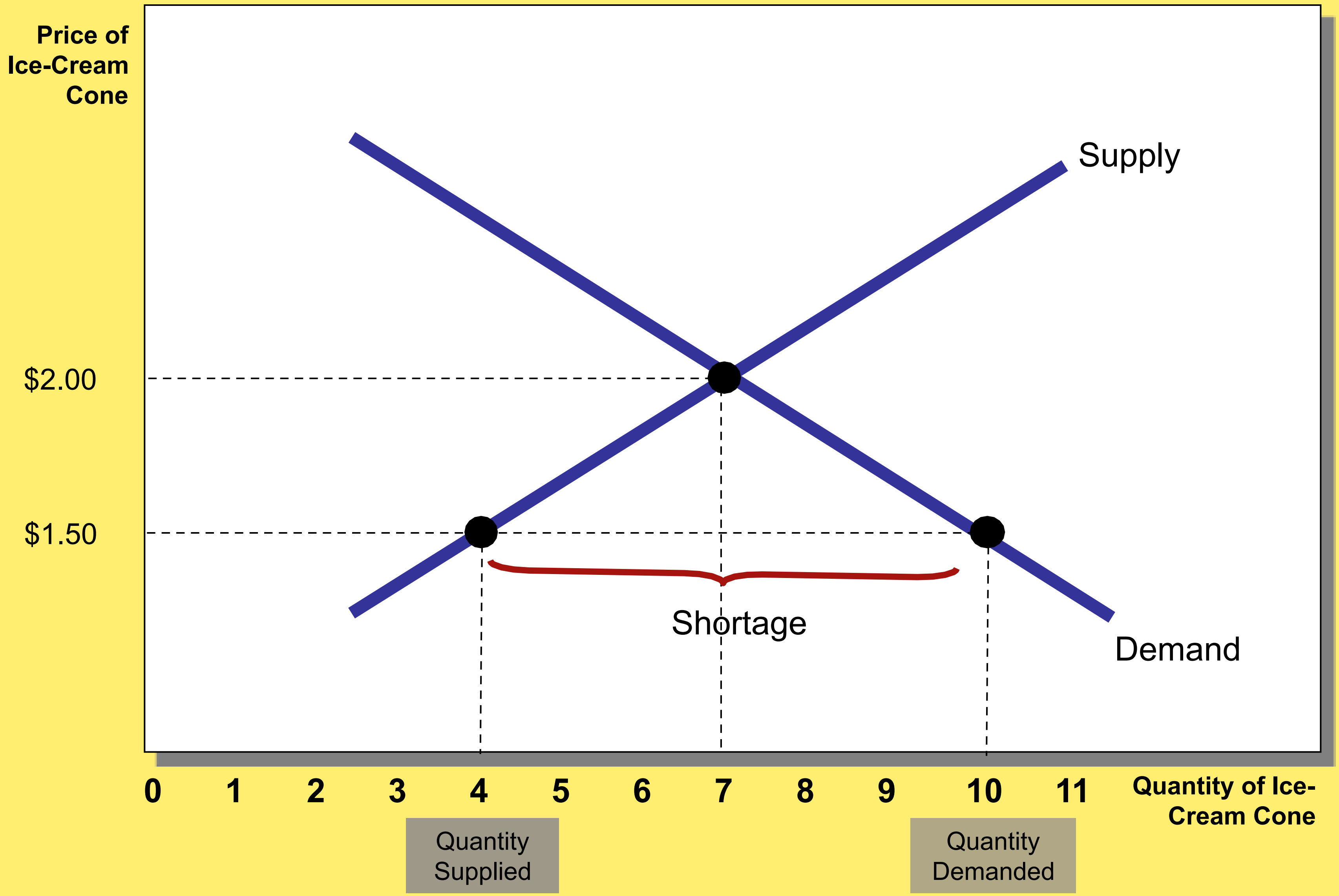


Figure 4-9 b): Excess Demand



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.
- Use the supply-and-demand diagram to see how the shift affects equilibrium price and quantity.
- Example: Hot weather

Figure 4-10: How an Increase Demand Affects the Equilibrium

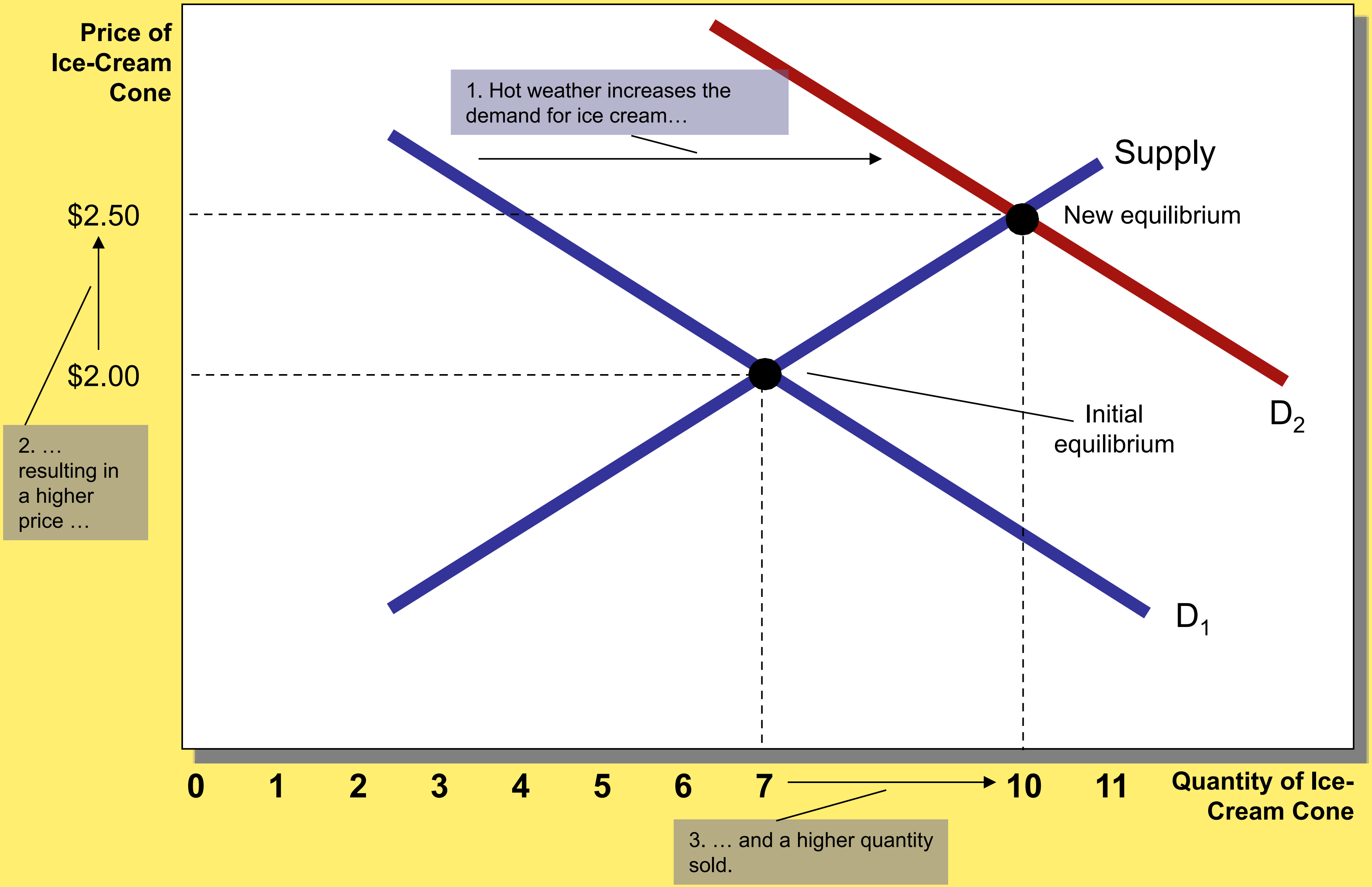


Figure 4-11: How a Decrease Supply Affects the Equilibrium

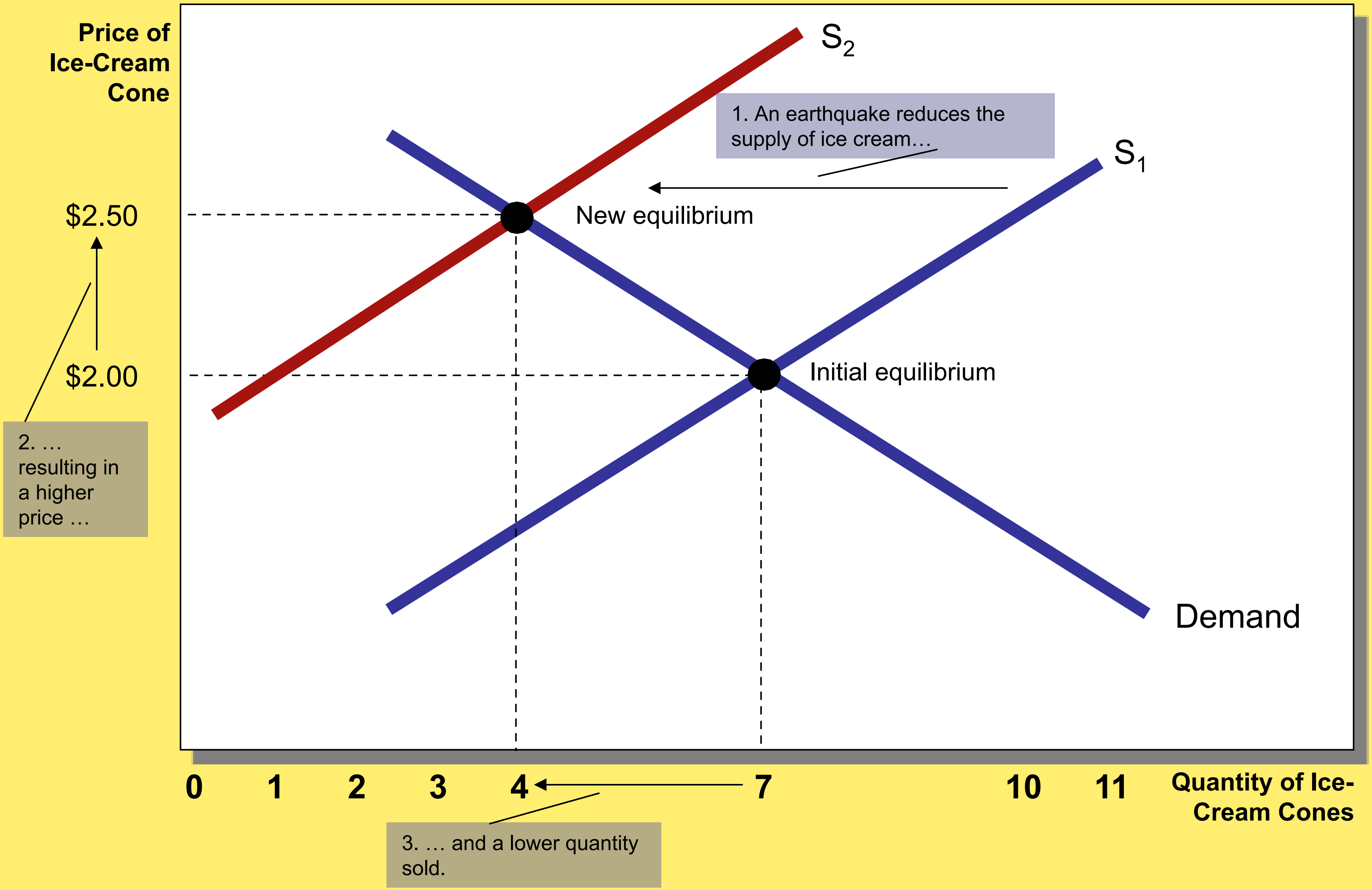


Figure 4-12 a): A Shift in Both Supply and Demand

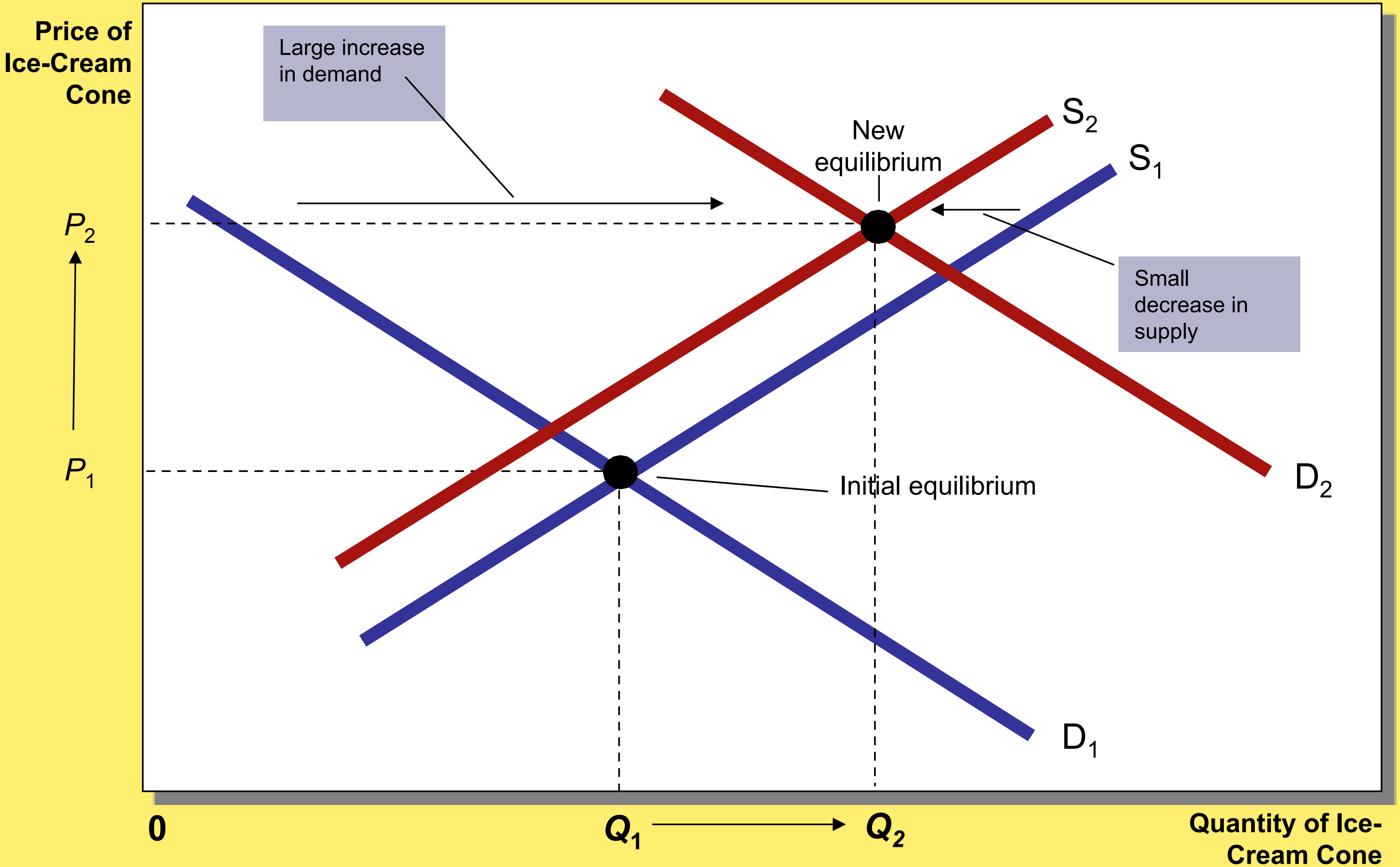


Figure 4-12 b): A Shift in Both Supply and Demand

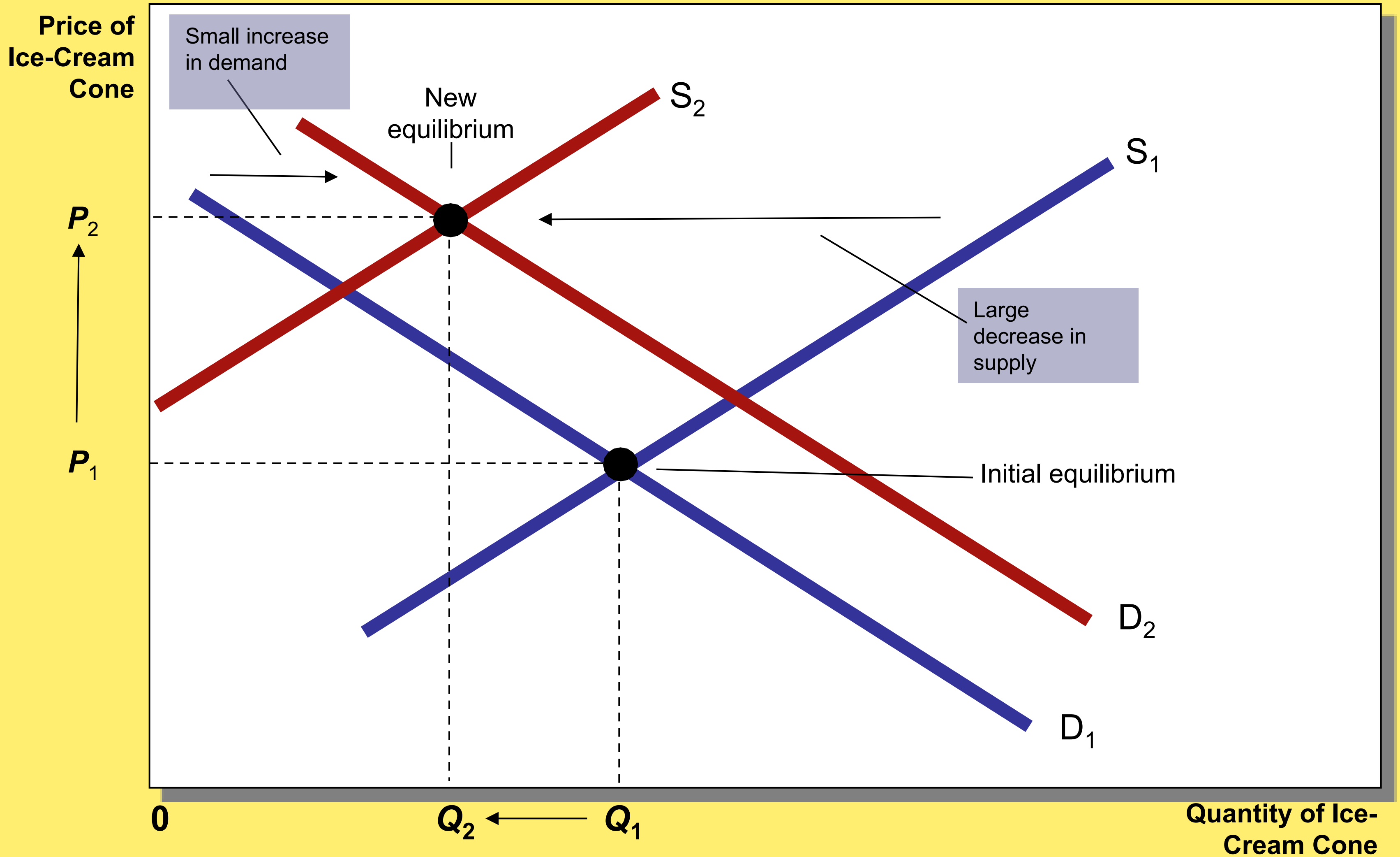


Table 4-8: What Happens to Price and Quantity when Supply or Demand Shifts

Concluding Remarks…

- Market economies harness the forces of supply and demand. . .
- Supply and Demand together determine the prices of the economy's different goods and services. . .
- Prices in turn are the signals that guide the allocation of resources.

Summary

- Economists use the model of supply and demand to analyze competitive markets.
- In a competitive market, there are many buyers and sellers, each of whom has little or no influence on the market price.

Summary

- The demand curve shows how the quantity of a good depends upon the price.
  - According to the law of demand, as the price of a good falls, the quantity demanded rises. Therefore, the demand curve slopes downward.
  - In addition to price, other determinants of how much consumers want to buy include income, the prices of complements and substitutes, tastes, expectations, and the number of buyers.
  - If one of these factors changes, the demand curve shifts.

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. Therefore, the supply curve slopes upward.
  - In addition to price, other determinants of how much producers want to sell include input prices, technology, expectations, and the number of sellers.
  - If one of these factors changes, the supply curve shifts.

Summary

- Market equilibrium is determined by the intersection of the supply and demand curves.
- At the equilibrium price, the quantity demanded equals the quantity supplied.
- The behavior of buyers and sellers naturally drives markets toward their equilibrium.

The End