Demand Curves, Movements along Demand Curves, and Shifts in Demand Curves

Part A: A Change in Demand versus a Change in Quantity Demanded

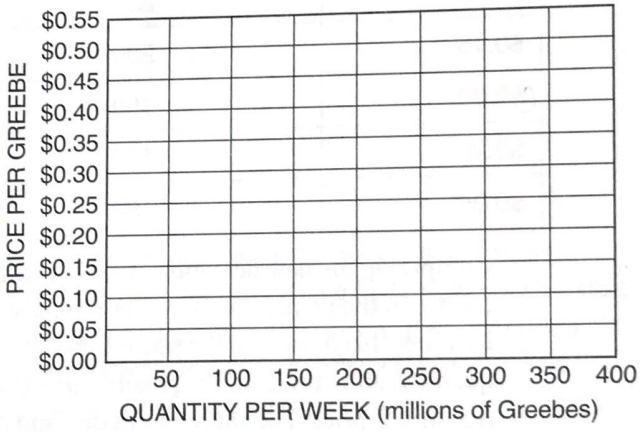
Student Alert: The distinction between a "change in demand" and a "change in quantity demanded" is very important!

Table 1-4.1 shows the market demand for a hypothetical product: Greebes. Study the data and plot the demand for Greebes on the graph in Figure 1-4.1. Label the demand curve D, and answer the questions that follow.

Table 1-4.1
Demand for Greebes

Price (per Greebe)	Quantity demanded per week (millions of Greebes)
$0.10	350
$0.15	300
$0.20	250
$0.25	200
$0.30	150
$0.35	100
$0.40	50
$0.45	0

Figure 1-4.1
Demand for Greebes



1. The data for demand curve D indicate that at a price of $0.30 per Greebe, buyers would be willing to buy _____ million Greebes. All other things held constant, if the price of Greebes increased to $0.40 per Greebe, buyers would be willing to buy _____ million Greebes. Such a change would be a decrease in (*demand / quantity demanded*). All other things held constant, if the price of Greebes decreased to $0.20, buyers would be willing to buy _____ million Greebes. Such a change would be called an increase in (*demand / quantity demanded*).

Now, let's suppose there is a change in federal income-tax rates that affects the disposable income of Greebe buyers. This change in the *ceteris paribus* (all else being equal) conditions underlying the original demand for Greebes will result in a new set of data, shown in Table 1-4.2. Study these new data, and add the new demand curve for Greebes to the graph in Figure 1-4.1. Label the new demand curve D_1 and answer the questions that follow.

Table 1-4.2

New Demand for Greebes

Price (per Greebe)	Quantity demanded per week (millions of Greebes)
$0.05	300
$0.10	250
$0.15	200
$0.20	150
$0.25	100
$0.30	50

2. Comparing the new demand curve (D_1) with the original demand curve (D), we can say that the change in the demand for Greebes results in a shift of the demand curve to the (*left / right*). Such a shift indicates that at each of the possible prices shown, buyers are now willing to buy a (*smaller / larger*) quantity; and at each of the possible quantities shown, buyers are willing to offer a (*higher / lower*) maximum price. The cause of this demand curve shift was a(n) (*increase / decrease*) in tax rates that (*increased / decreased*) the disposable income of Greebe buyers.

Now, let's suppose that there is a dramatic change in people's tastes and preferences for Greebes. This change in the *ceteris paribus* conditions underlying the original demand for Greebes will result in a new set of data, shown in Table 1-4.3. Study these new data, and add the new demand curve for Greebes to the graph in Figure 1-4.1. Label the new demand curve D_2 and answer the questions that follow.

Table 1-4.3
New Demand for Greebes

Price (per Greebe)	Quantity demanded per week (millions of Greebes)
$0.20	350
$0.25	300
$0.30	250
$0.35	200
$0.40	150
$0.45	100
$0.50	50

3. Comparing the new demand curve (D_2) with the original demand curve (D), we can say that the change in the demand for Greebes results in a shift of the demand curve to the (*left / right*). Such a shift indicates that at each of the possible prices shown, buyers are now willing to buy a (*smaller / larger*) quantity; and at each of the possible quantities shown, buyers are willing to offer a (*lower / higher*) maximum price. The cause of this shift in the demand curve was a(n) (*increase / decrease*) in people's tastes and preferences for Greebes.

Part B: Do You Get It?

Now, to test your understanding, choose the answer you think is the best in each of the following multiple-choice questions.

4. All other things held constant, which of the following would *not* cause a change in the demand (shift in the demand curve) for motorcycles?

   (A) A decrease in consumer incomes

   (B) A decrease in the price of motorcycles

   (C) An increase in the price of bicycles

   (D) An increase in people's tastes and preferences for motorcycles

5. "Rising oil prices have caused a sharp decrease in the demand for oil." Speaking precisely, and using terms as they are defined by economists, choose the statement that best describes this quotation.

   (A) The quotation is correct: an increase in price causes a decrease in demand.

   (B) The quotation is incorrect: an increase in price causes an increase in demand, not a decrease in demand.

   (C) The quotation is incorrect: an increase in price causes a decrease in the quantity demanded, not a decrease in demand.

   (D) The quotation is incorrect: an increase in price causes an increase in the quantity demanded, not a decrease in demand.

6. "As the price of domestic automobiles has risen, customers have found foreign autos to be a better bargain. Consequently, domestic auto sales have been decreasing, and foreign auto sales have been increasing." Using only the information in this quotation and assuming everything else remains constant, which of the following best describes this statement?

   (A) A shift in the demand curves for both domestic and foreign automobiles

   (B) A movement along the demand curves for both foreign and domestic automobiles

   (C) A movement along the demand curve for domestic autos, and a shift in the demand curve for foreign autos

   (D) A shift in the demand curve for domestic autos, and a movement along the demand curve for foreign autos

Part C: Consumer Surplus

Once we have the demand curve, we can define the concept of *consumer surplus*. Consumer surplus is the value a consumer receives from the purchase of a good in excess of the price paid for the good. Stated differently, consumer surplus is the difference between the amount a person is willing and able to pay for a unit of the good and the actual price paid for that unit. For example, if you are willing to pay $100 for a coat but are able to buy the coat for only $70, you have a consumer surplus of $30.

Refer again to the demand data from Table 1-4.1, and assume the price is $0.30. Some buyers will benefit because they are willing to pay prices higher than $0.30 for this good. Note that each time the price is reduced by $0.05, consumers will buy an additional 50 million units. Table 1-4.4 shows how to calculate the consumer surplus resulting from the price of $0.30.

Table 1-4.4
Finding the Consumer Surplus When the Price Is $0.30

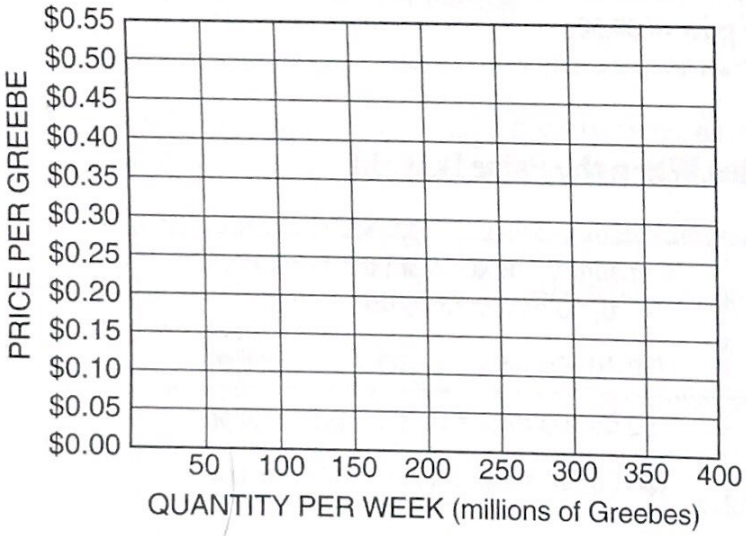
Price willing to pay	Quantity demanded	Consumer surplus from the increments of 50 million units if P = $0.30
$0.40	50 million units	($0.10)(50 million units) = $5.0 million
$0.35	100 million units	($0.05)(50 million units) = $2.5 million
$0.30	150 million units	($0.00)(50 million units) = $0.0 million

For those consumers willing to buy 50 million units at a price of $0.40, the consumer surplus for each unit is $0.10 (= $0.40 – $0.30), making the consumer surplus for all these units equal to $5.0 million. If the price is reduced from $0.40 to $0.35, there are consumers willing to buy another 50 million units; the consumer surplus for these buyers is $0.05 per unit ($0.35 – $0.30) or a total of $2.5 million for all 50 million units. If the price is lowered another $0.05 to $0.30, an extra 50 million units will be demanded; the consumer surplus for these units is $0.00 since $0.30 is the highest price these consumers are willing to pay. Thus, if the price is $0.30, a total of 150 million units are demanded and the total consumer surplus is $7.5 million.

An approximation of the total consumer surplus from a given number of units of a good can be shown graphically as the area below the demand curve and above the price paid for those units. In Figure 1-4.2, redraw the demand curve (D) from the data in Table 1-4.1. We see that if the price is \$0.30, the quantity demanded is 150 million units. Consumer surplus from these 150 million units is the shaded area between the demand curve D and the horizontal price line at \$0.30. We can find the area of this triangle using the familiar rule of (½) × base × height.

Figure 1-4.2

Consumer Surplus



7. What is the value of consumer surplus in this market if the price is \$0.30? \$_____
   Show how you calculated the value of the area of the triangle representing consumer surplus.

8. Answer these questions based on the discussion of Figure 1-4.2.

   (A) If the price is increased from \$0.30 to \$0.35, consumer surplus will (*increase / decrease*). Why?

   (B) If the price is decreased from \$0.30 to \$0.25, consumer surplus will (*increase / decrease*). Why?

Reasons for Changes in Demand

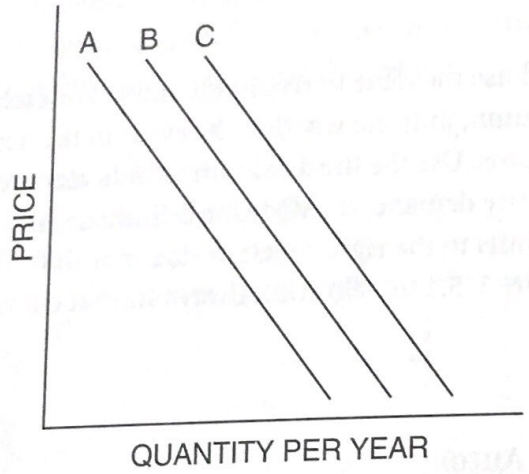
Part A: Does the Demand Curve Shift?

Read the eight newspaper headlines in Table 1-5.1, and use the table to record the impact of each event on the demand for U.S.-made autos. In the second column, indicate whether the event in the headline will cause consumers to buy more or less U.S.-made autos. Use the third column to indicate whether there is a change in demand (ΔD) or a change in quantity demanded (ΔQd) for U.S.-made autos. In the third column, decide whether the demand curve shifts to the right or left or does not shift. Finally, indicate the letter for the new demand curve. Use Figure 1-5.1 to help you. **Always start at curve B,** and move only one curve at a time.

Table 1-5.1
Impact of Events on Demand for U.S.-Made Autos

Headline	Will consumers buy more or less U.S. autos?	Is there a change in demand (ΔD) or a change in quantity demanded (ΔQd)?	Does the demand curve for U.S. autos shift to the right or left or not shift?	What is the new demand curve for U.S. autos?
1. Consumers' Income Drops	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
2. Millions of Immigrants Enter the U.S.	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
3. Price of Foreign Autos Drop	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
4. Major Cities Add Inexpensive Bus Lines	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
5. Price of U.S. Autos Rises	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
6. Price of U.S. Autos Expected to Rise Soon	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
7. Families Look Forward to Summer Vacations	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*
8. U.S. Auto Firms Launch Effective Ad Campaigns	*More / Less*	*ΔD / ΔQd*	*Right / Left / No Shift*	*A / B / C*

Figure 1-5.1
Demand for U.S.-Made Autos



Part B: Why Does the Demand Curve Shift?

Categorize each change in demand in Part A according to the reason why demand changed. A given demand curve assumes that consumer expectations, consumer tastes, the number of consumers in the market, the income of consumers, and the prices of substitutes and complements are unchanged. In Table 1-5.2, place an X next to the reason that the event described in the headline caused a change in demand. One headline will have no answer because it will result in a change in quantity demanded rather than a change in demand.

Table 1-5.2
Reasons for a Change in Demand for U.S.-Made Autos

	Headline number							
Reason	1	2	3	4	5	6	7	8
9. A change in consumer expectations								
10. A change in consumer taste								
11. A change in the number of consumer in the market								
12. A change in income								
13. A change in the price of a substitute good								
14. A change in the price of a complementary good								

Supply Curves, Movements along Supply Curves, and Shifts in Supply Curves

In this activity, we will assume that the supply curve of Greebes is upward sloping.

Part A: A Change in Supply versus a Change in Quantity Supplied

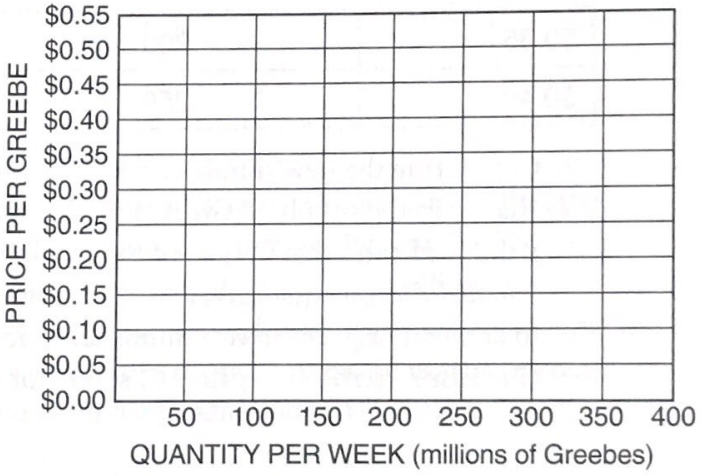
Student Alert: **The distinction between a "change in supply" and a "change in quantity supplied" is very important!**

Study the data in Table 1-6.1 and plot the supply of Greebes on the graph in Figure 1-6.1. Label the supply curve S and answer the questions that follow.

Table 1-6.1
Supply of Greebes

Price (per Greebe)	Quantity supplied per week (millions of Greebes)
$0.05	0
$0.10	50
$0.15	100
$0.20	150
$0.25	200
$0.30	250
$0.35	300
$0.40	350

Figure 1-6.1
Supply of Greebes



1. The data for supply curve S indicate that at a price of $0.25 per Greebe, suppliers would be willing to offer _____ million Greebes. All other things held constant, if the price of Greebes increased to $0.30 per Greebe, suppliers would be willing to offer _____ million Greebes. Such a change would be an increase in (*supply / quantity supplied*). All other things held constant, if the price of Greebes decreased to $0.20 per Greebe, suppliers would be willing to offer _____ million Greebes. Such a change would be called a decrease in (*supply / quantity supplied*).

Now, let's suppose that there is a change in the price of several of the raw materials used in making Greebes. This change in the *ceteris paribus* conditions underlying the original supply of Greebes will result in a new set of data, such as that shown in Table 1-6.2. Study the data, and plot this supply of Greebes on the graph in Figure 1-6.1. Label the new supply curve S_1 and answer the questions that follow.

Table 1-6.2

New Supply of Greebes

Price (per Greebe)	Quantity supplied per week (millions of Greebes)
$0.15	0
$0.20	50
$0.25	100
$0.30	150
$0.35	200
$0.40	250

2. Comparing the new supply curve (S_1) with the original supply curve (S), we can say that the change in the supply of Greebes results in a shift of the supply curve to the (*left / right*). Such a shift indicates that at each of the possible prices shown, suppliers are now willing to offer a (*smaller / larger*) quantity; and at each of the possible quantities shown, suppliers are willing to accept a (*higher / lower*) minimum price. The cause of this supply curve shift was a(n) (*increase / decrease*) in prices of several of the raw materials used in making Greebes.

Now, let's suppose that there is a dramatic change in the price of Silopanna, a resource used in the production of Greebes. This change in the *ceteris paribus* conditions underlying the original supply of Greebes will result in a new set of data shown in Table 1-6.3. Study the data, and plot this supply of Greebes on the graph in Figure 1-6.1. Label the new supply curve S_2 and answer the questions that follow.

Table 1-6.3
New Supply of Greebes

Price (per Greebe)	Quantity supplied per week (millions of Greebes)
$0.10	150
$0.15	200
$0.20	250
$0.25	300
$0.30	350
$0.35	400

3. Comparing the new supply curve (S_2) with the original supply curve (S), we can say that the change in the supply of Greebes results in a shift of the supply curve to the (*left / right*). Such a shift indicates that at each of the possible prices shown, suppliers are now willing to offer a (*smaller / larger*) quantity; and at each of the possible quantities shown, suppliers are willing to accept a (*lower / higher*) minimum price. The cause of this supply curve shift is a(n) (*increase / decrease*) in the price of Silopanna, a resource used in the production of Greebes.

Part B: Do You Get It?

Now, to check your understanding, choose the answer you think is the one best alternative in each of the following multiple-choice questions.

4. All other things held constant, which of the following would *not* cause a change in the supply of beef?

   (A) A decrease in the price of beef

   (B) A decrease in the price of cattle feed

   (C) An increase in the price of cattle feed

   (D) An increase in the cost of transporting cattle to market

5. "Falling oil prices have caused a sharp decrease in the supply of oil." Speaking precisely, and using terms as they are defined by economists, choose the statement that best describes this quotation.

   (A) The quotation is correct: decrease in price causes a decrease in supply.

   (B) The quotation is incorrect: decrease in price causes an increase in supply, not a decrease in supply.

   (C) The quotation is incorrect: decrease in price causes an increase in the quantity supplied, not a decrease in supply.

   (D) The quotation is incorrect: decrease in price causes a decrease in the quantity supplied, not a decrease in supply.

6. You overhear a fellow student say, "Economic markets are confusing. If supply increases, then price decreases; but if price decreases, then supply also will decrease. If supply falls, price will rise; but if price rises, supply also will rise." Dispel your friend's obvious confusion (in no more than one short paragraph) below.

Part C: Producer Surplus

Once we have the supply curve, we can define the concept of *producer surplus*. Producer surplus is the value a producer receives from the sale of a good in excess of the marginal cost of producing the good. Stated differently, producer surplus is the difference between the price a seller receives for a unit of the good and the cost to the seller of producing that unit. For example, if your cost of producing a coat is $50 but you are able to sell the coat for $70, you have a producer surplus of $20.

Refer again to the supply curve data from Table 1-6.1, and assume the price is $0.25. Some sellers will benefit because based on their low marginal costs of production, they are willing to accept prices lower than $0.25 for this good. Note that each time the price is increased by $0.05, sellers will provide an additional 50 million units. Table 1-6.4 shows how to calculate the producer surplus resulting from the price of $0.25.

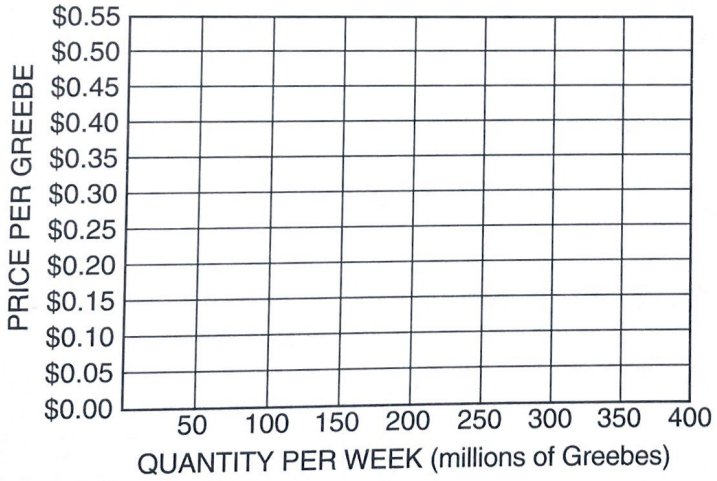
Table 1-6.4
Finding the Producer Surplus When the Price Is $0.25

Price willing to accept	Quantity supplied	Producer surplus from the increments of 50 million units if P = $0.25
$0.10	50 million units	($0.15)(50 million units) = $7.5 million
$0.15	100 million units	($0.10)(50 million units) = $5.0 million
$0.20	150 million units	($0.05)(50 million units) = $2.5 million
$0.25	200 million units	($0.00)(50 million units) = $0.0 million

For those producers willing to sell 50 million units at a price of $0.10, the producer surplus for each unit is $0.15 (= $0.25 – $0.10), making the producer surplus for all these units equal to $7.5 million. There are other producers who will put an extra 50 million units on the market if the price is $0.15. The producer surplus for these sellers is $0.10 per unit (= $0.25 – $0.15) or a total of $5.0 million for all 50 million units. If the price is raised another $0.05 to $0.20, an extra 50 million units will be supplied; the producer surplus for these units is $2.5 million, or $0.05 per unit (= $0.25 – $0.20). If the price is $0.25, another 50 million units will be supplied. The producer surplus for these units, however, is $0.00 since $0.25 is the lowest price these producers are willing to accept. Thus, if the price is $0.25, a total of 200 million units are supplied and the total producer surplus is $15.0 million.

An approximation of the total producer surplus from a given number of units of a good can be shown graphically as the area above the supply curve and below the price paid for those units. In Figure 1-6.2, redraw the supply curve (S) from the data in Table 1-6.1. We see that if the price is $0.25, the quantity supplied is 200 million units. Consumer surplus from these 200 million units is the shaded area between the supply curve S and the horizontal price line at $0.25. We can find the area of this triangle using the familiar rule of (½) × base × height.

Figure 1-6.2
Producer Surplus



7. What is the value of producer surplus in this market if the price is $0.25? _____
Show how you calculated the value of the area of the triangle representing producer surplus.

8. Answer these questions based on the discussion of Figure 1-6.2.

(A) If the price is increased from \$0.25 to \$0.30, producer surplus will (*increase / decrease*). Why?

(B) If the price is decreased from \$0.25 to \$0.20, producer surplus will (*increase / decrease*). Why?

Reasons for Changes in Supply

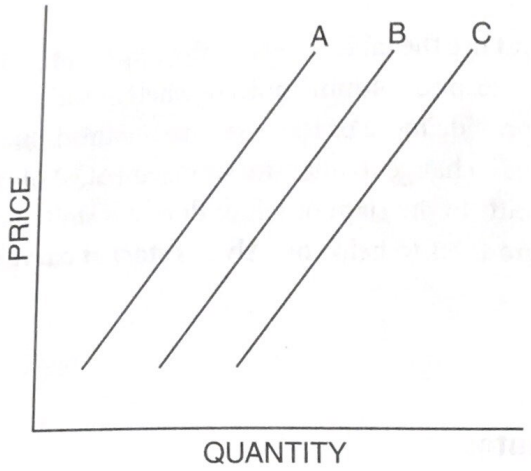
Part A: Does the Supply Curve Shift?

Read the eight newspaper headlines in Table 1-7.1, and use the table to record the impact of each event on the supply of cars from U.S. auto producers. In the second column, indicate whether the event in the headline will cause American auto producers to provide more or less cars. Use the third column to indicate whether there is a change in supply (ΔS) or a change in quantity supplied (ΔQs) of cars. In the third column, decide whether the supply curve shifts to the right or left or does not shift. Finally, indicate the letter for the new supply curve. Use Figure 1-7.1 to help you. **Always start at curve B**, and move only one curve at a time.

Table 1-7.1
Impact of Events on Supply of U.S.-Made Autos

Headline	Should U.S. auto firms produce more or less?	Is there a change in supply (ΔS) or a change in quantity supplied (ΔQs)?	Does the supply curve of cars shift to the right or left or not shift?	What is the new supply curve for cars?
1. Auto Workers' Union Agrees to Wage Cuts	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
2. New Robot Technology Increases Efficiency	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
3. Price of U.S. Cars Increases	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
4. Nationwide Auto Workers Strike Begins	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
5. Cost of Steel Decreases	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
6. Major Auto Producer Goes Out of Business	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
7. Buyers Reject New Car Models	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*
8. Government Gives Car Producers a Subsidy	*More / Less*	*ΔS / ΔQs*	*Right / Left / No Shift*	*A / B / C*

Figure 1-7.1
Supply of U.S.-Made Cars



Part B: Why Does the Supply Curve Shift?

Categorize each change in supply in Part A according to the reason why supply changed. In Table 1-7.2, place an X next to the reason that the headline indicated a change in supply. In some cases, more than one headline could be matched to a reason. It is possible a headline does not indicate a shift in supply because it will result in a change in quantity supplied rather than a change in supply.

Table 1-7.2
Impact of Events on Supply of U.S.-Made Autos

	Headline number							
Reason	1	2	3	4	5	6	7	8
9. A change in costs of inputs to production process								
10. A change in technology								
11. A change in the number of producers in the market								
12. Government policies								

Equilibrium Price and Equilibrium Quantity

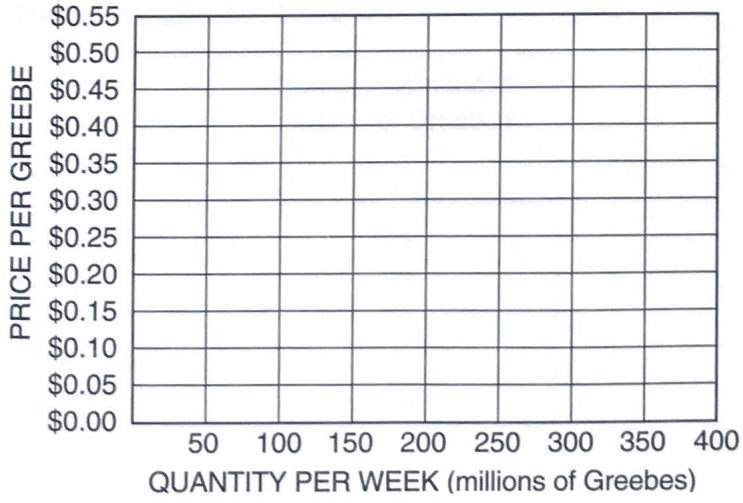
Table 1-8.1 below shows the demand for Greebes and the supply of Greebes. Plot these data on the axes in Figure 1-8.1. Label the demand curve D and label the supply curve S. Then answer the questions that follow.

Student Alert: **A "change in demand" or a "change in supply" results in a change in price, while a "change in quantity demanded" or a "change in quantity supplied" is the result of a change in price.**

Table 1-8.1
Demand for and Supply of Greebes

Price (per Greebe)	Quantity demanded (millions of Greebes)	Quantity supplied (millions of Greebes)
$0.05	400	0
$0.10	350	50
$0.15	300	100
$0.20	250	150
$0.25	200	200
$0.30	150	250
$0.35	100	300
$0.40	50	350
$0.45	0	400

Figure 1-8.1
Demand for and Supply of Greebes



1. Under these conditions, competitive market forces would tend to establish an equilibrium price of _____ per Greebe and an equilibrium quantity of _____ million Greebes.

2. If the price currently prevailing in the market is $0.30 per Greebe, buyers would want to buy _____ million Greebes and sellers would want to sell _____ million Greebes. Under these conditions, there would be a (*shortage / surplus*) of _____ million Greebes. Competitive market forces would cause the price to (*increase / decrease*) to a price of _____ per Greebe. At this new price, buyers would now want to buy _____ million Greebes, and sellers now want to sell _____ million Greebes. Because of this change in (*price / underlying conditions*), the (*demand / quantity demanded*) (*increased / decreased*) by _____ million Greebes, and the (*supply / quantity supplied*) (*increased / decreased*) by _____ million Greebes.

3. If the price currently prevailing in the market is $0.20 per Greebe, buyers would want to buy _____ million Greebes, and sellers would want to sell _____ million Greebes. Under these conditions, there would be a (*shortage / surplus*) of _____ million Greebes. Competitive market forces would cause the price to (*increase / decrease*) to a price of _____ per Greebe. At this new price, buyers would now want to buy _____ million Greebes, and sellers now want to sell _____ million Greebes. Because of this change in (*price / underlying conditions*), the (*demand / quantity demanded*) (*increased / decreased*) by _____ million Greebes, and the (*supply / quantity supplied*) (*increased / decreased*) by _____ million Greebes.

4. At equilibrium, is each of the following true or false? Explain.

   (A) The quantity demanded is equal to the quantity supplied.

   (B) Demand equals supply.

5. Now, suppose a mysterious blight causes the supply schedule for Greebes to change as shown in Table 1-8.2:

Table 1-8.2
New Supply of Greebes

Price (per Greebe)	Quantity supplied (millions of Greebes)
$0.15	0
$0.20	50
$0.25	100
$0.30	150
$0.35	200

Plot the new supply schedule on the axes in Figure 1-8.1 and label it S_1. Label the new equilibrium E_1. Under these conditions, competitive market forces would tend to establish an equilibrium price of _____ per Greebe and an equilibrium quantity of _____ million Greebes.

Compared with the equilibrium price in Question 1, we say that because of this change in (*price / underlying conditions*), the (*supply / quantity supplied*) changed; and both the equilibrium price and the equilibrium quantity changed. The equilibrium price (*increased / decreased*), and the equilibrium quantity (*increased / decreased*).

Compared with the consumer and producer surpluses in Question 4, consumer surplus has (*increased / decreased*), and producer surplus has (*increased / decreased*).

6. Now, with the supply schedule at S_1, suppose further that a sharp drop in people's incomes as the result of a prolonged recession causes the demand schedule to change as shown in Table 1-8.3.

Table 1-8.3
New Demand for Greebes

Price (per Greebe)	Quantity demanded (millions of Greebes)
$0.15	200
$0.20	150
$0.25	100
$0.30	50
$0.35	0

Plot the new demand schedule on the axes in Figure 1-8.1 and label it D_1. Label the new equilibrium E_2. Under these conditions, with the supply schedule at S_1, competitive market forces would establish an equilibrium price of _____ per Greebe and an equilibrium quantity of _____ million Greebes. Compared with the equilibrium price in Question 5, because of this change in (*price / underlying conditions*), the (*demand / quantity demanded*) changed. The equilibrium price (*increased / decreased*), and the equilibrium quantity (*increased / decreased*).

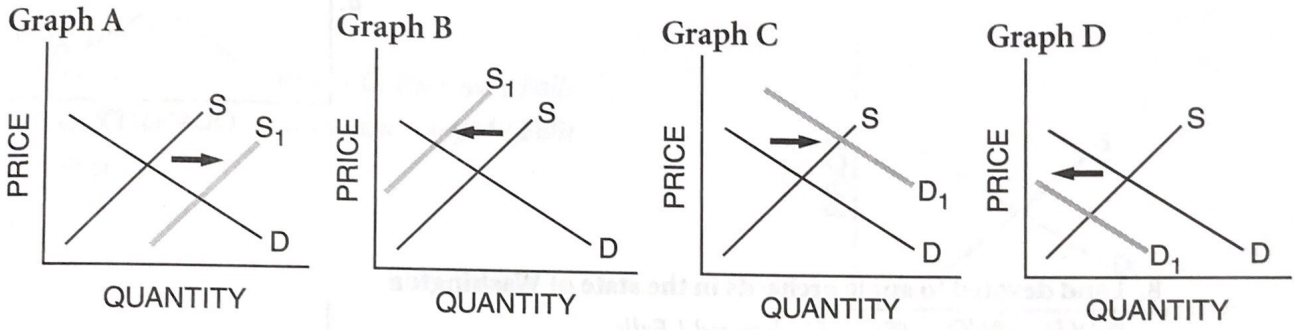
Shifts in Supply and Demand

Part A: The Market for Jelly Beans

Fill in the blanks with the letter of the graph that illustrates each situation. You may use a graph more than once.

Figure 1-9.1

The Supply and Demand for Jelly Beans



1. The price of sugar, a key ingredient in producing jelly beans, increases. _____

2. The price of bubble gum, a close substitute for jelly beans, increases. _____

3. A machine is invented that makes jelly beans at a lower cost. _____

4. The government places a tax on foreign jelly beans, which have a considerable share of the market. _____

5. The price of soda, a complementary good for jelly beans, increases. _____

6. Widespread prosperity allows people to buy more jelly beans. _____

Part B: Apples, Pears, and Pies

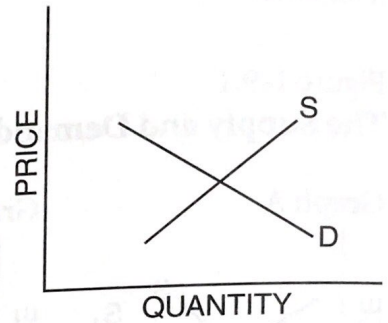
Connecticut ships large amounts of apples to all parts of the United States by rail. Circle the words that show the effects on price and quantity for each situation, and complete the graphs below, showing how a hurricane that destroys apples before they are picked in Connecticut might affect the price and quantity of each commodity. Then provide your reasoning.

7. **Apples in Boston**

   Price: *Rises / Unchanged / Falls*

   Quantity: *Rises / Unchanged / Falls*

   Reason:

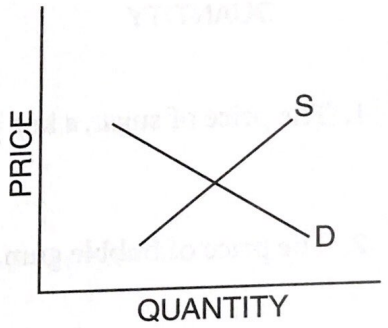


8. **Land devoted to apple orchards in the state of Washington**

   Price: *Rises / Unchanged / Falls*

   Quantity: *Rises / Unchanged / Falls*

   Reason:

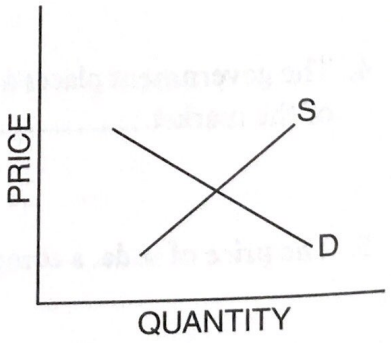


9. **Apples grown in the state of Washington**

   Price: *Rises / Unchanged / Falls*

   Quantity: *Rises / Unchanged / Falls*

   Reason:

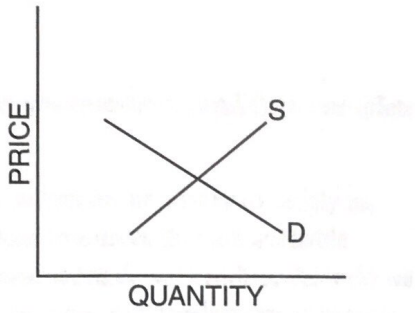


10. **Pears**

Price: *Rises / Unchanged / Falls*

Quantity: *Rises / Unchanged / Falls*

Reason:

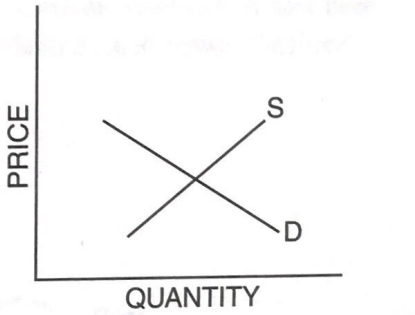


11. **Apple pies**

Price: *Rises / Unchanged / Falls*

Quantity: *Rises / Unchanged / Falls*

Reason:

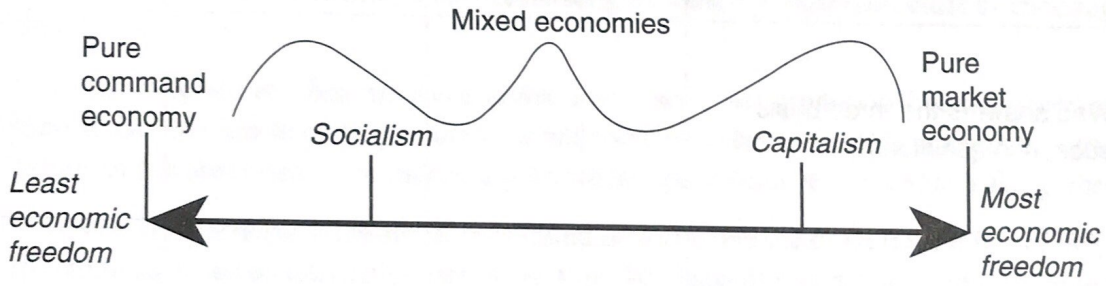


Economic Systems

Read the following description of economic systems, answer the review questions, and then complete the table.

It's a fact: our needs and wants are always greater than the available resources necessary to satisfy us. We all face scarcity, which forces us to choose how best to use the limited resources that are available. Ultimately, society has to make three very important economic decisions: what do we produce, how do we produce, and for whom do we produce? To answer these three questions, a society develops an economic system, or organized way of answering the three questions. Because people do not all share the same values, beliefs, geographic circumstances, and climates, different societies have developed very different economic systems to deal with scarcity. Figure 1-10.1 shows a continuum of the economic systems that have been developed throughout history based on the amount of freedom individuals have to answer the three economic questions.

Figure 1-10.1
Economic Systems



In a pure command economy, all economic decisions are made by the government or even a single leader. Ancient Egypt under the pharaohs and present-day North Korea are close, if not perfect, examples of pure command economies. The leaders decide what is to be produced, how it is produced, and for whom it is produced. Private property is nonexistent in the pure command model, and only the needs of the government are addressed.

In a pure market economy, all economic decisions are left to the individuals in the society. These individuals, motivated by their own self-interest and their desire for private property, answer the three economic questions. To get what they need or want, individuals come together in markets and trade for mutual benefit.

Although pure market economies are nonexistent, something close to the pure market model called *capitalism* does exist. The United States and a number of other countries can be described as capitalistic economies. Capitalism is an example of a mixed economy. Mixed economies are the reality of today's world. In a mixed economy, both individuals and government answer the three basic economic questions. If most decisions and property are under the control of individuals in the society, then the system can be described as capitalistic. If most decisions and property are under state control, then the system can be described as socialist.