

# Supply & Demand

## Study Guide



Name \_\_\_\_\_

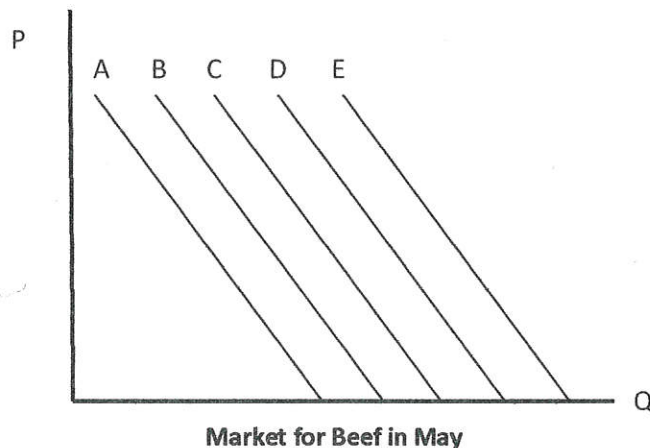
Class Period \_\_\_\_\_



## Reasons for Changes in Demand

Read the following seven newspaper headlines. In each case decide if the event will cause a change in the demand for beef. If so, determine if it is an increase or decrease (use up and down arrows) and state the determinant of demand that caused the change.

Start at curve "C". Shift one curve at a time. For example, if you decide that 1 will increase the demand for beef, you will shift to curve "D", which is now your starting point for 2. Do not skip curves.



*Price of beef to rise in June.*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Millions of aliens swell US population.*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Pork prices drop.*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Mad cow disease strikes Kansas.*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Real income for Americans drops for the 3<sup>rd</sup> month in a row.*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Charcoal shortage threatens memorial day cookouts.*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Nationwide fad: The Disco Burger!*

Demand will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

## Price Elasticity of Demand

While the law of demand tells us that a change in price will always cause an inverse change in the quantity demanded, *how much* the quantity demanded will change depends on the elasticity of the demand for the product or service. If a producer increases price, and the quantity demanded goes down a lot, the demand for the good is **elastic**. On the other hand, if the quantity demand only decreases a little, the demand for the good is **inelastic**.

Determinants of Elasticity:

1. Is the good or service a necessity or a luxury?
2. How many substitutes are available for the good or service?
3. How large a portion of a purchaser's budget is the good or service?

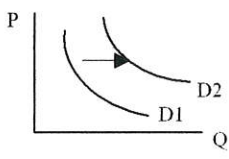
Determine whether the demand for the following items is price elastic or inelastic. Give the reasons for your answer.

1. Salt
2. New cars
3. Pork chops
4. European vacation
5. Insulin
6. Insulin at one of four drugstores in a shopping mall

## Analyzing Changes in Demand

Changes in the following variables can lead to a shift in demand:

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>a) change in income</li> <li>b) change in the price of substitutes</li> <li>c) change in the price of complements</li> </ul> | <ul style="list-style-type: none"> <li>d) # of buyers in the marketplace</li> <li>e) consumers tastes and preferences</li> <li>f) future price expectations</li> </ul> |
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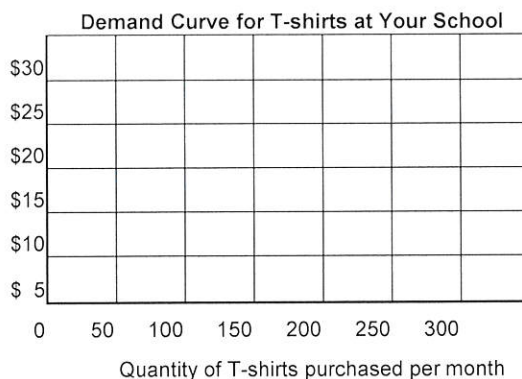
Event	Market (product)	Demand Shift	Determinant
The price of steak increases.	Hamburger		B – Price of Substitute
Low-fat diets grow in popularity	Fresh grapes		
Disney World increases admission prices.	Hotel rooms near Disney World		
The price of eggs falls	Bacon		
A hard freeze destroys much of the future orange crop.	Orange Juice		
The price of gasoline increases dramatically.	Motorcycles		
People's incomes drop.	Macaroni & Cheese		

## DEMAND

Examine the two demand schedules that follow and plot the demand curves. Then answer the questions that follow.

### Demand Schedule for T-shirts at Your School

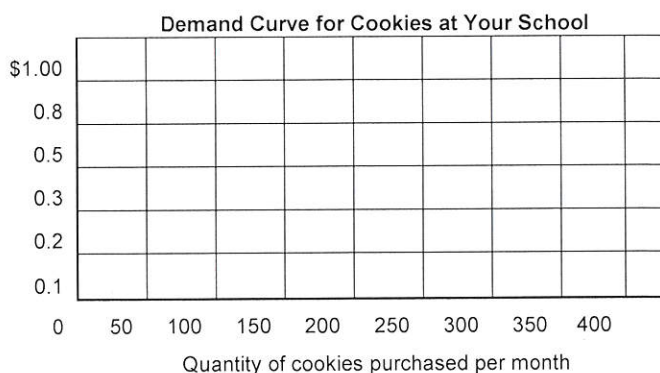
Quantity Demanded	Price
300	\$5.00
250	\$10.00
200	\$15.00
150	\$20.00
100	\$25.00
50	\$30.00



1. a. If the price of T-shirts is \$10, how many will people buy? \_\_\_\_\_  
 b. If the price of T-shirts is \$20, how many will people buy? \_\_\_\_\_
2. a. If the quantity of T-shirts sold is 200, what is the price? \_\_\_\_\_  
 b. If the quantity of T-shirts sold is 100, what is the price? \_\_\_\_\_

### Demand Schedule for Cookies at Your School

Quantity Demanded	Price
400	\$0.10
350	\$0.20
250	\$0.30
150	\$0.50
100	\$0.80
50	\$1.00



1. a. If the price of cookies is .30, how many will people buy? \_\_\_\_\_  
 b. If the price of cookies is .80, how many will people buy? \_\_\_\_\_
2. a. If the quantity of cookies sold is 150, what is the price? \_\_\_\_\_  
 b. If the quantity of cookies sold is 400, what is the price? \_\_\_\_\_
3. What affect does the price seem to have on the quantity demanded/sold?



## DEMAND

The following table summarizes the number of concert tickets four people want to buy each year at different possible prices. (Average price of concert tickets for various artists!)

Monthly Demand for CDs					
<i>Various ticket Prices</i>	<i>Jim</i>	<i>Michael</i>	<i>Pam</i>	<i>Angela</i>	<i>Total</i>
\$20	5	10	8	4	
\$30	4	9	6	4	
\$40	3	9	4	2	
\$50	2	6	2	2	
\$60	1	5	0	0	
\$70	0	1	0	0	

1. Assume that Jim, Michael, Pam, and Angela represent the total market for concert tickets.

- Show the *market demand* by filling in the blanks in the last column of the table.
- Is the market demand a specific number of tickets? \_\_\_\_\_ Why or why not?

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2. Suppose the price of tickets rises from \$40 to \$50.

- What happens to the total number of tickets the four consumers want to buy?

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- Is this a change in demand? Explain.

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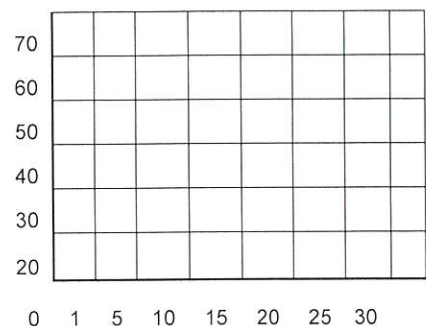
3. Use the graph to plot the market demand for concert tickets on the following graph.

- Suppose music producers decide to broadcast more concerts on television for a pay-per-view fee of \$10. Will this cause a change in the demand for concert tickets? Explain why, and illustrate on the graph.

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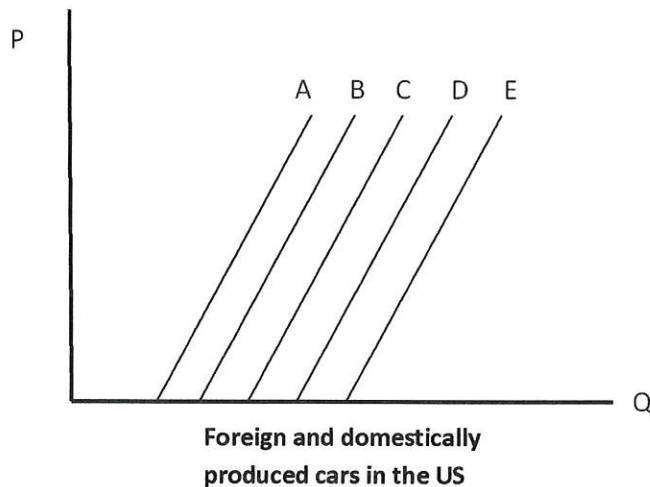
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## Reasons for Changes in Supply

Read the following seven newspaper headlines. In each case decide if the event will cause a change in the supply of cars. If so, determine if it is an increase or decrease (use up and down arrows) and state the determinant of supply that caused the change.

Start at curve "C". Shift one curve at a time. For example, if you decide that 1 will increase the supply of cars, you will shift to curve "D", which is now your starting point for 2. Do not skip curves. One of the headlines will not cause a change in the supply of cars.



*The auto workers union agrees to wage and fringe cuts.*

Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*New robot technology increases efficiency.*

Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Nationwide auto strike began at midnight.*

Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*New auto import quotas reduce the flow of foreign cars.*

Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Cost of steel rises.*

Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Auto producer goes bankrupt and closes operation.*

Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_

*Buyers reject new models.*

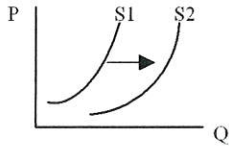
Supply will \_\_\_\_\_ Determinant \_\_\_\_\_ Curve \_\_\_\_\_



## Analyzing Changes in Supply

Changes in the following variables can lead to a shift in supply:

- a) Number of suppliers
- b) Cost of production

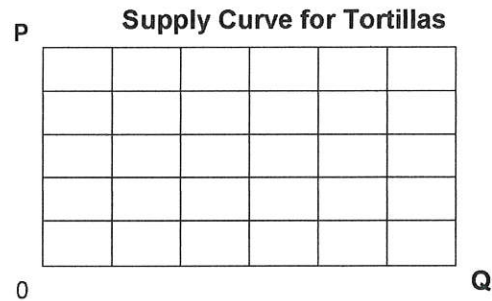
Event	Market (product)	Supply Shift	Determinant
The microchip is invented	Cell Phones		B – Cost of production
Auto workers go on strike	Ford Trucks		
Price of corn increases	Tortillas		
Dell closes all US Operations	Home Computers		
A new fertilizer is developed that dramatically improves wheat production	Bread		
A heavy frost destroys half the world's coffee crop	Coffee		
Recall of Chinese made toys because of lead	All toys		

## SUPPLY

Examine the two supply schedules that follow and plot the supply curves.

### Supply Schedule for Tortillas

Qty. Supplies (dozen per day)	Price
500	\$0.60
1,000	\$0.80
1,500	\$1.00
2,000	\$1.20
2,500	\$1.40

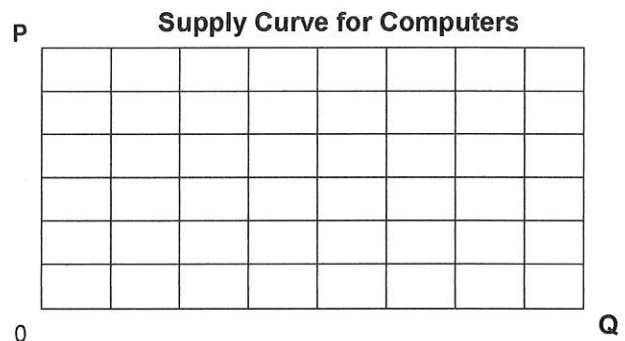


Quantity of Tortillas Supplied to the Market  
(dozens per day)

1. If the price of tortillas is \$1.20 per dozen, how many dozen will suppliers offer for sale? \_\_\_\_\_
2. If the price of tortillas is \$.80 per dozen, how many dozen will suppliers offer for sale? \_\_\_\_\_

### Supply Schedule for Computers

Quantity Supplied	Price
400	\$2,000
350	\$1,800
250	\$1,600
150	\$1,400
100	\$1,200
50	\$1,000

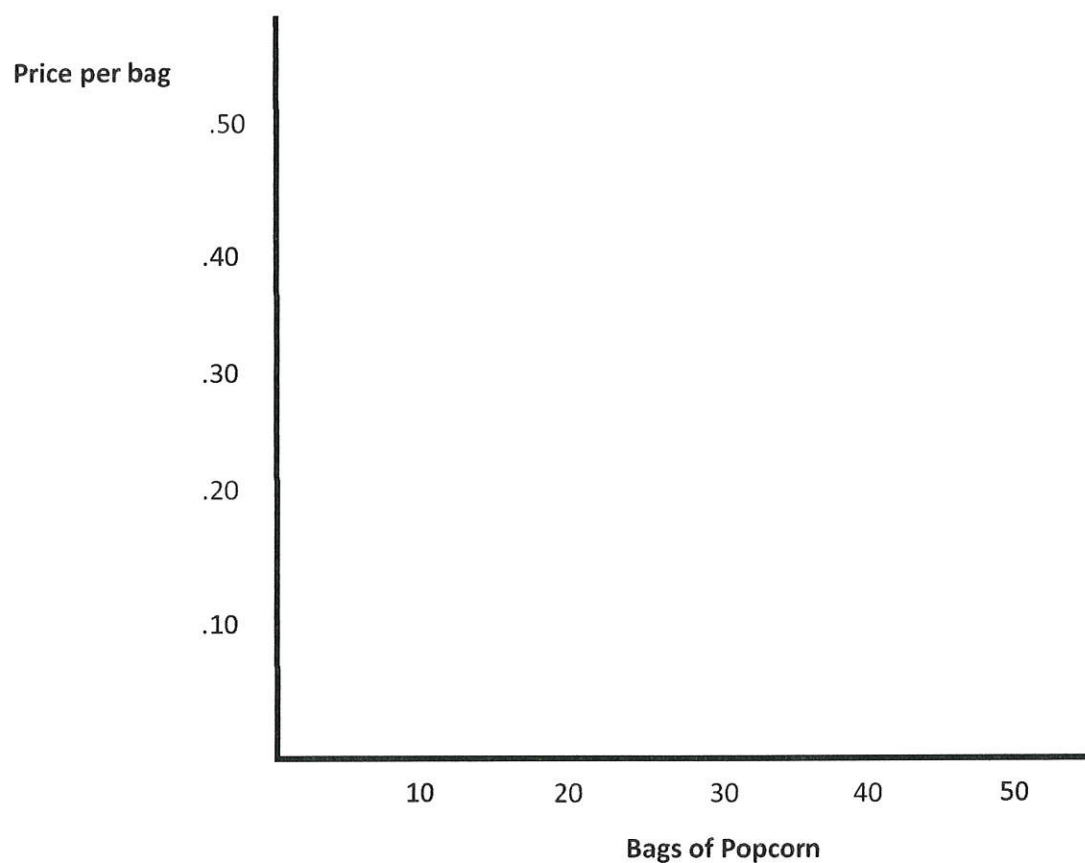


Quantity of Computers Supplied to the Market

3. If the quantity of computers offered for sale is 250, what is the price per computer? \_\_\_\_\_
  4. If the quantity of computers offered for sale is 100, what is the price per computer? \_\_\_\_\_
  5. How many computers will suppliers offer for sale at \$1,000? \_\_\_\_\_
  6. How many computers will suppliers offer for sale at \$1,800? \_\_\_\_\_
  7. What effect does the price seem to have on the quantity suppliers offer for sale? \_\_\_\_\_
- 
8. Calculate total revenue (price x quantity)
    - a) If the price of tortillas is \$1.00 each: \_\_\_\_\_
    - b) If 350 computers are sold each month: \_\_\_\_\_
    - c) If the price of computers is \$1,600 each: \_\_\_\_\_

## Plotting the Equilibrium Price

*Plot a supply and demand curve using the information below and then answer the questions.*



<u>Quantity Demanded</u>	<u>Price</u>	<u>Quantity Supplied</u>
50	\$.10	10
40	\$.20	20
30	\$.30	30
20	\$.40	40
10	\$.50	50

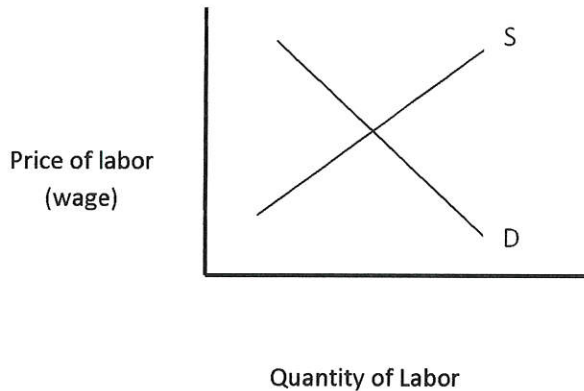
1. What is the equilibrium price and quantity? How do you know?
2. Why can't the supplier demand \$.50 a bag?
3. Why can't the buyer pay only \$.10 a bag?

## Effects of a Minimum Wage

Imagine that you are a member of the US House of Representatives, and you are trying to decide whether to vote *yes* or *no* on a bill to raise the minimum wage.

1. What do you believe to be the arguments in support of increasing the minimum wage?

2. An opponent of the minimum wage is an economist. He draws a graph of the market for unskilled labor for you.

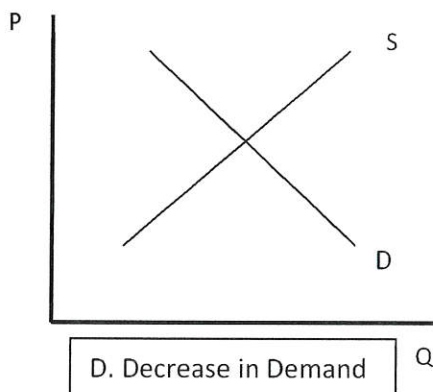
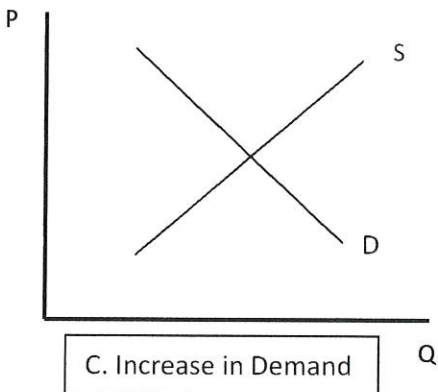
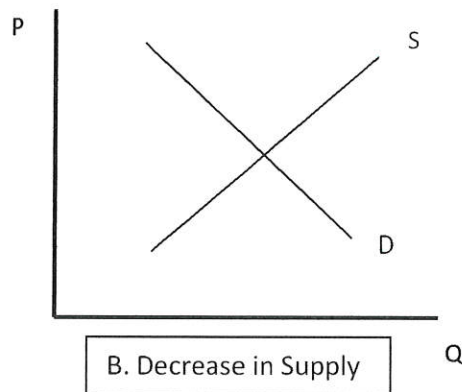
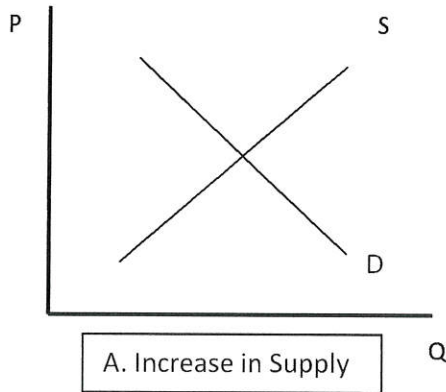


- a. What does the supply of unskilled labor represent?
  - b. What does the demand for unskilled labor represent?
  - c. Change the graph above to show the effect of a minimum wage.
  - d. What does a minimum wage create in the market for unskilled labor?
3. How will you vote on the bill, and why?

## Shifts in Supply and Demand

First, draw a new curve for each of the following graphs to show the change as labeled. Indicate what happens to equilibrium price and quantity.

Then, read the following situations about the market for jelly beans, and fill in the blank with the letter of the graph that illustrates the situation. You may use a graph more than once. State the determinant that caused the change.



1. The price of sugar increases. \_\_\_\_\_
2. The price of lollipops, a close substitute for jellybeans, increases. \_\_\_\_\_
3. A machine is invented that makes jelly beans at a lower cost. \_\_\_\_\_
4. The government places a tariff on foreign jelly beans, which have a considerable share of the market. \_\_\_\_\_
5. The price of juice boxes, a complementary good to jelly beans, increases. \_\_\_\_\_
6. Economic recovery encourages people to buy more jelly beans. \_\_\_\_\_

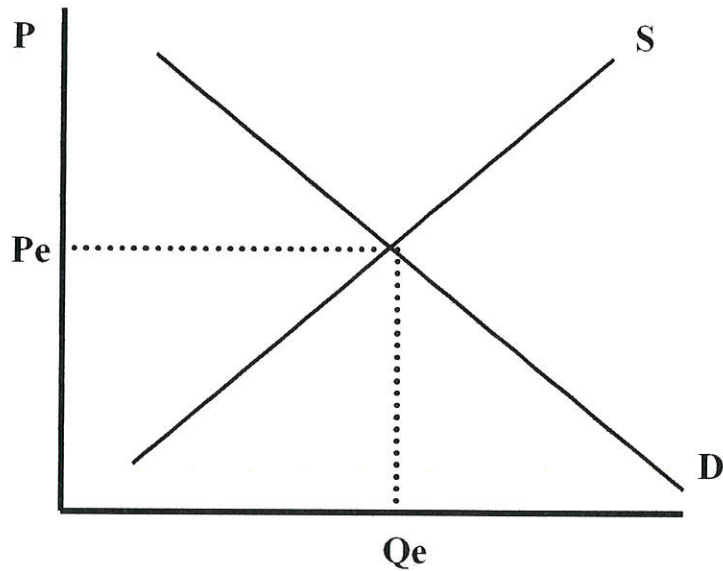


## MARKET: OIL

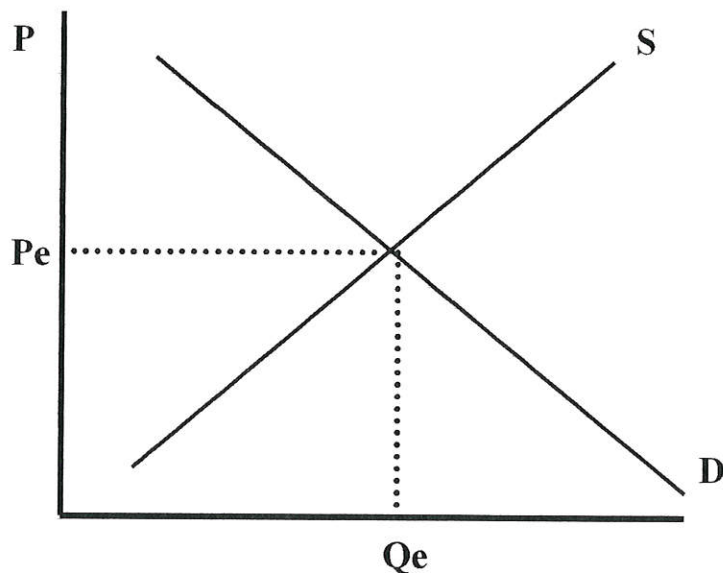
### SUPPLY AND DEMAND ACTIVITY WORKSHEET

On each of the Supply and Demand graphs provided, move the supply or demand curve to indicate the influence of these statements on the market for oil. Indicate the effect on price and quantity.

1. The rising popularity of hybrid vehicles.

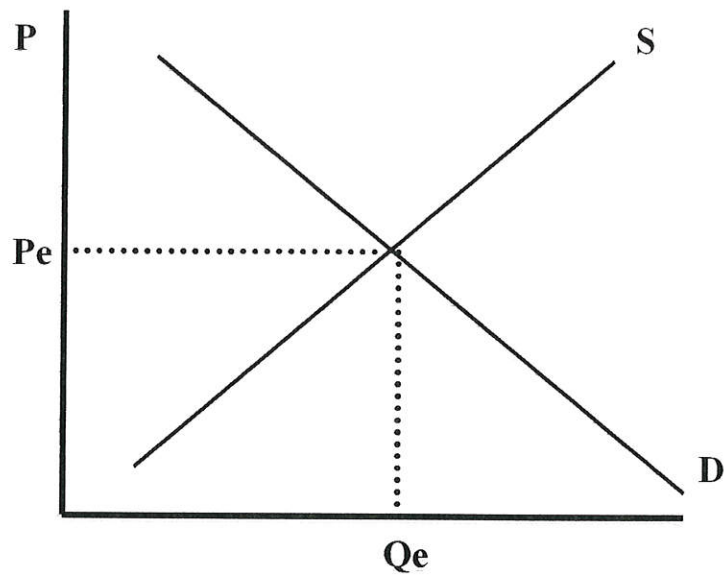


2. The increasing use of plastics to produce a wide range of products.

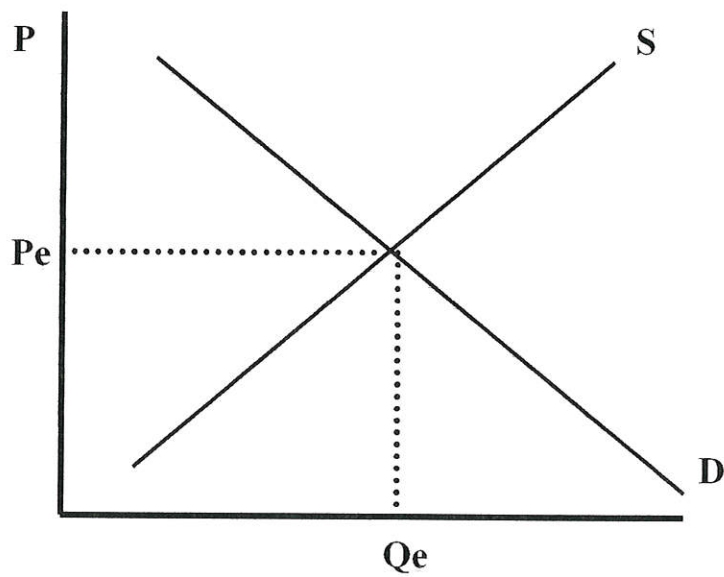




3. A slowdown in the production of crude oil worldwide.



4. Congressional action that allows oil-drilling operations in more areas of the Alaskan preserve.



## The Business of Supply and Demand

Choose a local business, or any business that you are familiar with, to use as an example in this assessment.

1. Identify three factors or events that would affect the supply of goods/services your business produces. With each factor identified, indicate the possible affect on the price of the good/service.
2. Identify three factors or events that would affect the demand for goods/services your business produces. With each factor identified, indicate the possible affect on the price of the good/service.
3. Assume a necessary resource to make your product becomes more scarce. What could the producer do to adapt to this situation?
4. Due to the situation described in #3 above, the final product of your business also becomes more scarce. List three measures consumers may choose to address the problems resulting from this scarcity.

## Section 4 Reading Notes

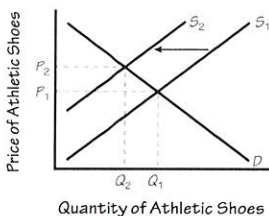
Analyze the effects of each news headline about the athletic shoe market. For each event,

- label the axes, demand curve, and supply curve.
- explain the effect of the event on the demand or supply curve *for athletic shoes*.
- graph the resulting change in equilibrium price and equilibrium quantity of athletic shoes.

The first headline is completed for you.

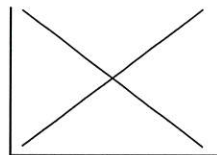
### Effect of Headlines on the Athletic Shoe Market

**1** Price of Rubber Increases Dramatically

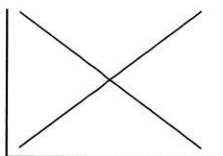


Because of an increase in the cost of inputs, the supply curve will decrease, or shift to the left. Equilibrium price increases. Equilibrium quantity decreases.

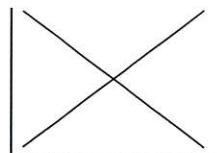
**2** Movie Increases Popularity of Athletic Shoes



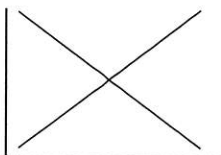
**3** Price of Sport Sandals Drops Drastically



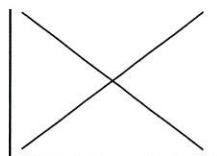
**4** Government Sets Price Ceiling Below Equilibrium Price to Help Consumers Save Money



**5** Two New Athletic Shoe Companies Enter the Market—Production Begins Today



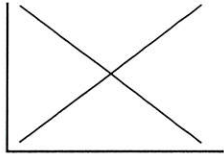
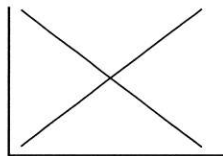
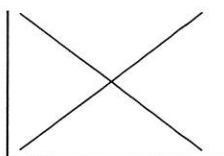
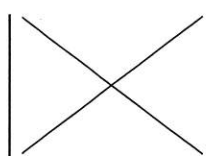
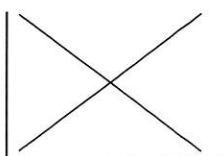
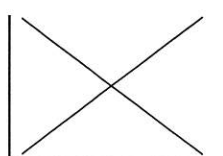
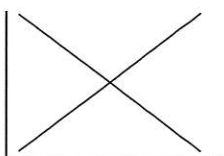
**6** Consumers Worry Price of Athletic Shoes May Increase Next Month



Analyze the effects of each news headline about events affecting a variety of markets. Identify the market indicated in parentheses before conducting your analysis. For each event,

- label the axes, demand curve, and supply curve.
- explain the effect of the event on either the demand or the supply curve.
- graph the resulting change in equilibrium price and equilibrium quantity.

### Effect of Headlines on Various Markets

<p><b>7</b> Insects Kill Half the World's Tomato Crop (tomato market)</p> 	<p><b>8</b> Recession Hits—Many Consumers Lose Jobs (movie ticket sales market)</p> 
<p><b>9</b> Price of Computer Chips Tumbles (computer market)</p> 	<p><b>10</b> Price of Salmon Skyrockets (sea bass market)</p> 
<p><b>11</b> Government Places Excise Tax on Cigarettes to Discourage Smoking (cigarette market)</p> 	<p><b>12</b> Government Sets Price Floor Above Equilibrium Price to Help Farmers (milk market)</p> 
<p><b>13</b> Price of DVD Players Plummet (DVD market)</p> 	<p><b>14</b> New, More Efficient Assembly Line Technology Introduced (automobile market)</p> 