Introduction to Supply

Use the table to answer questions 1-2.

Price	Quantity Demanded	Quantity Supplied
$0	50	0
$5	40	15
$10	30	30
$15	20	45
$20	10	60

1. If the current price of Good Z is $15, there will be:
   A. excess demand of 25 units.
   B. excess supply of 25 units.
   C. a shortage of 20 units.
   D. a surplus of 45 units.
   E. no excess demand or excess supply.

2. The equilibrium price and quantity in this market are, respectively:
   A. $5 and 40 units.
   B. $20 and 60 units.
   C. $10 and 30 units.
   D. $15 and 20 units.
   E. $10 and 60 units.

3. Milk is an important ingredient in the production of ice cream. If the price of milk increases, then one would expect, holding all other things constant:
   A. the supply curve for ice cream to shift left.
   B. the supply curve for ice cream to shift right.
   C. no change in the supply curve for ice cream.
   D. a movement along the supply curve for ice cream curve, resulting in more ice cream supplied.
   E. the demand curve for ice cream to shift to the left.

4. Consider the supply curve for cotton shirts. An increase in the price of cotton will:
   A. increase the supply of cotton shirts.
   B. decrease the supply of cotton shirts.
   C. not shift the supply of cotton shirts.
   D. decrease the demand for cotton shirts.
   E. increase the quantity supplied of cotton shirts.

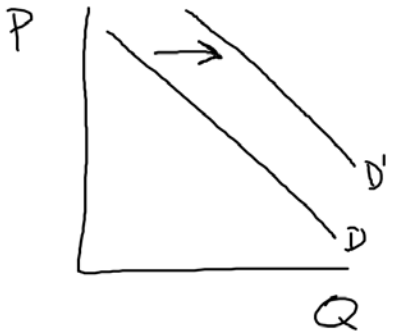
5. A technological advance in the production of automobiles will:
   A. increase the demand for automobiles.
   B. increase the supply of automobiles.
   C. decrease the demand for automobiles.
   D. decrease the supply of automobiles.
   E. have no effect on the demand or supply of automobiles.

6. High-fructose corn syrup, which is derived from corn, is an important ingredient in the production of many soft drinks. If the price of corn increases, one would expect:
   A. the supply curve for soft drinks to shift left.
   B. the quantity supplied of soft drinks to increase.
   C. the demand for soft drinks to increase.
   D. the supply curve for soft drinks to shift right.
   E. the demand and supply curves will both shift to the left.

7. If the price of a commodity increases, you would expect the:
   A. supply curve to shift to the left.
   B. quantity supplied to increase.
   C. quantity supplied to decrease.
   D. supply curve to shift to the right.
   E. demand curve to shift to the left.

8. If equilibrium exists:
   A. all individuals must have an equal amount of income.
   B. the price in that market will not fluctuate by more than 5%.
   C. there will be no remaining opportunities for individuals to make themselves better off.
   D. the number of buyers equals the number of sellers.
   E. it is the result of deliberate government action in the markets.

9. Suppose that over time, you have observed an increase in the number of people owning digital cameras and a decrease in the price of these cameras. Which of the following would account for this?
   A. The supply curve has shifted outward and the demand curve has remained constant.
   B. The supply curve has shifted inward and the demand curve has remained constant.
   C. The demand curve has shifted outward and the supply curve has remained constant.
   D. The demand curve has shifted inward and the supply curve has remained constant.



10. Draw a correctly labeled graph showing the demand for apples. Indicate on the graph what happens when a new report from the Surgeon General shows that "an apple a day <u>really does</u> keep the doctor away." Explain why the change you depicted occurs.

The demand for apples will shift to the right as the number of people in the market ("M" in "M.E.R.I.T.") increases. More apples are demanded at every given price level, which results in a right shift.

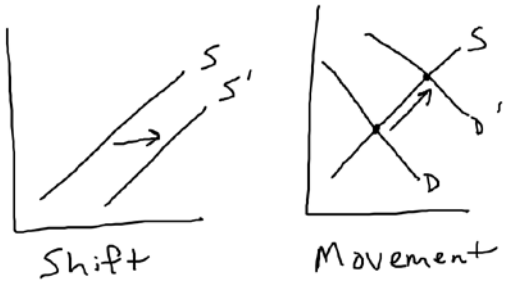
11. Many students get confused when differentiating between supply and the quantity supplied (just as they also get confused by the difference between demand and the quantity demanded).

(a) Explain the difference between supply and quantity supplied.

The concept of "supply" incorporates the entire supply schedule (all conceivable combinations of quantity and price). Quantity supplied represents the amount of a good supplied at a given price.

(b) Use a correctly-labeled graph to show the difference between a change in supply and a change in the quantity supplied.

A change in supply results in a new supply schedule being created. This change is shown by shifting the supply curve either to the right or left. A change in the quantity supplied represents a movement along the supply curve.



(c) Explain what causes a change in the quantity supplied.

A change in the quantity supplied is caused by a change in the equilibrium point. This change in equilibrium is caused by a shift in the demand curve, which causes a change in market price.

12. What factors cause a shift in the supply curve? (HINT: Think in terms of T.R.I.C.E.)

- T<u>ECHNOLOGY</u>
- R<u>ELATED PRICES</u>
- I<u>NPUT PRICES</u>
- C<u>OMPETITION</u>
- E<u>XPECTATIONS</u>

13. <u>Explain</u> whether each of the following events represents <u>either</u> a *shift of* the supply curve or a *movement along* the supply curve. If the event represents a movement along the supply curve, explain what would cause this movement.

a. More homeowners put their houses up for sale during a real estate boom that cases house prices to rise.
The quantity of houses supplied rises as a result of an increase in prices. This is a <u>*MOVEMENT ALONG*</u> the supply curve.

b. Many strawberry farmers open temporary roadside stands during harvest season, even though prices are usually low at that time.
The quantity of strawberries supplied is higher at any given price. This is a rightward <u>*SHIFT OF*</u> the supply curve.

c. Immediately after the school year begins, fast-food chains must raise wages, which represent the price of labor, to attract workers.

The quantity of supplied is lower at any given wage. This is a leftward *SHIFT OF* the supply curve compared to the supply curve during school vacation. So, in order to attract workers, fast-food chains have to offer higher wages.

d. Many construction workers temporarily move to areas that have suffered hurricane damage, lured by higher wages.

The quantity of labor supplied rises in response to a rise in wages. This is a *MOVEMENT ALONG* the supply curve.

e. Since new technologies have made it possible to build larger cruise ships (which are cheaper to run per passenger), Caribbean cruise lines have offered more cabins, at lower prices, than before.

The quantity of cabins supplied is higher at any given price. This is a rightward *SHIFT OF* the supply curve.

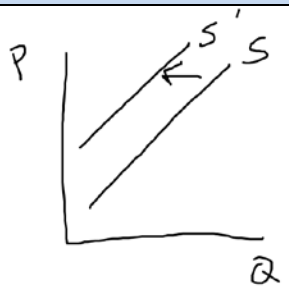
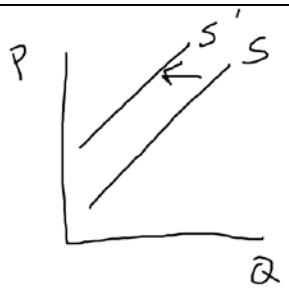
f. As the price of airline tickets rise, airlines add more flights.

The quantity of flights rises as a result of an increase in prices. This is a *MOVEMENT ALONG* the supply curve.

g. The price of jet fuel drops and airlines expand the number of flights.

The quantity of flights supplied is higher at any given price than it was before. This is a rightward *SHIFT OF* the supply curve.

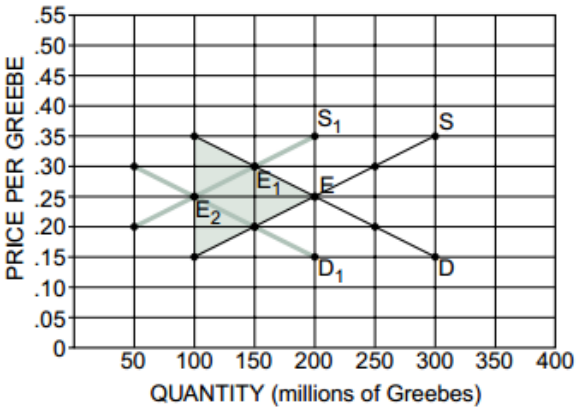
14. The price of related goods will impact the supply curve depending on whether the good is a substitute or a complement (just like with demand). Given the scenarios below, determine: (a) whether the goods are substitutes or complements, (b) the impact of the change on supply, (c) draw the change out on a properly-labeled graph.

Scenario	Substitutes or Complements	Impact on Supply Curve	Graph the Effect
Price of heating oil spikes due to a cold winter. What is the impact on the supply of gasoline?	Substitutes	Shifts supply curve for gasoline to the left because suppliers will switch from making gasoline to heating oil.	
The price of oranges rises due to consumer demand. What is the impact on the supply of orange juice?	Complements	Shifts the supply curve for orange juice to the left because suppliers will decrease their production due to an increase in input prices.	

The price of Toyota Prius cars falls. What is the impact on the supply of Toyota Siennas?	Substitutes	Shifts the supply curve for Siennas to the right because Toyota receives a higher relative price for Siennas now.	

15. Use the table below to graph out the supply and demand curves. Indicate the equilibrium price and quantity.

Price Per Greebe	Quantity Demanded (Millions)	Quantity Supplied (Millions)	Shortage or Surplus (Millions)
$0.15	300	100	Shortage (200 million)
$0.20	250	150	Shortage (100 million)
$0.25	200	200	Neither
$0.30	150	250	Surplus (100 million)
$0.35	100	300	Surplus (200 million)



a. Under these conditions, competitive market forces would tend to establish an equilibrium price of $0.25 per Greebe and an equilibrium quantity of 200 million Greebes.

b. Suppose that Greebes are found by the government to present a significant choking hazard for small children. Indicate on your graph the impact that news would have on the equilibrium price and quantity of Greebes. Explain why there is a change in the equilibrium.

The demand for Greebes would shift to the left, which would cause a decrease in the equilibrium price and quantity of Greebes.

c. What would happen to the equilibrium price and quantity of Greebes if titanium, which goes into the production of Greebes, becomes significantly more expensive? Explain why the change occurs.

The supply of Greebes would shift to the left as suppliers would be less willing to produce Greebes at every given price level due to the high price of titanium.

Factors that Shift Supply (TRICE)

Directions: Circle the impact that each of the changes listed below might have on the supply curve.

Changes in technology				
	If…	Supply of A …		
	The technology used to produce A improves…	⇧	⇔	⇩
Changes in the prices of related goods or services				
	If…	Supply of A …		
If A and B are **substitutes in production** …	…and the price of B **rises**…	⇧	⇔	⇩
	…and the price of B **falls**…	⇧	⇔	⇩
If A and B are **complements in production**…	…and the price of B **rises**…	⇧	⇔	⇩
	…and the price of B **falls**…	⇧	⇔	⇩
Changes in input prices				
	If…	Supply of A …		
	The price of an input used to produce A **rises**…	⇧	⇔	⇩
	The price of an input used to produce A **falls**…	⇧	⇔	⇩
Changes in the number of competitors				
	If…	Supply of A …		
	The number of producers of A **rises**…	⇧	⇔	⇩
	The number of producers of A **falls**…	⇧	⇔	⇩
Changes in expectations				
	If…	Supply of A …		
	The price of A is expected to **rise** in the future …	⇧	⇔	⇩
	The price of A is expected to **fall** in the future…	⇧	⇔	⇩