SUPPLY, DEMAND, AND MARKET EQUILIBRIUM
Practice Problems - Answer Key

Multiple choice questions.

1. A local grocery store orders 200 cases of Pepsi each week and sells them at a price of $6.00 per case. At the end of the first week, they have only sold 160 cases. What economic situation is the grocery store facing and what will have to happen to price in order for equilibrium to be attained?
a. surplus; price will rise.
b. surplus; price will fall.
c. shortage; price will rise.
d. shortage; price will fall.
e. nothing since the market is in equilibrium.

2. Which of the following can lead to an increase in the supply for good X?
a. a decrease in the number of sellers of good X.
b. an increase in the price of inputs used to make good X.
c. an increase in consumers' income, assuming good X is a normal.
d. an improvement in technology used in production of good X.
e. none of the above

3. An increase in the price of electricity will:
a. increase the demand for kerosene heaters.
b. increase the demand for light bulbs.
c. increase the demand for stereos.
d. increase the demand for TVs.

4. Which of the following events will cause an increase in the market demand for Guinness (a brand of beer)?
a. A decrease in the price of Guinness.
b. An increase in the price of Heineken (another brand of beer).
c. An increase in the price of Planters peanuts (a complementary good).
d. An increase in income, if Guinness is an inferior good.
e. None of the above will cause an increase in demand.

Short-answer questions.

1. The following table gives the daily supply and demand for hot dogs at a sporting event:

Price, $	Quantity demanded	Quantity supplied
2.10	800	7,200
1.80	1,600	4,800
1.60	2,400	2,400
1.40	3,200	800
1.20	4,100	200

a. What is the equilibrium price of hot dogs? What makes you think so?
According to the definition, the equilibrium price is the price at which quantity supplied equals quantity demanded. From the table we can see that at $1.60, Qs = Qd = 2,400. Therefore $1.60 is the equilibrium price.

b. If the organizers of the sporting event decide to set the price at 1.80, how many hot dogs will be sold?
At $1.80, 4,800 hot dogs will be offered for sale, but only 1,600 will be demanded. Therefore, only 1,600 hot dogs will be sold.

2. True or False? Explain.
In economics, "normal good" is the name for a good a normal individual can afford.

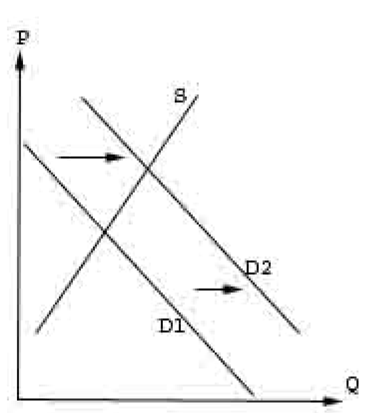
False. The expression "normal good" means that when a person's income increases, the consumption of that good also increases.

3. a. State the Law of Demand.

As the price of a good rises, all other things being equal, the quantity demanded of that good falls.

b. Over the last two decades, tuition fees at Purdue University have increased by 50%. At the same time, the number of students enrolled has increased from 22,000 to over 35,000.
Does this example demonstrate that the Law of Demand is false? Explain why or why not. Use graphs.

No, this fact does not refute the Law of Demand. The Law of Demand tells us what will happen to quantity demanded if price is the only factor that changes. In the example provided, many things have probably changed over twenty years, average family income and the reputation of the school being just two of them. As a result, the demand for the services provided by that university has shifted. See graph.



4. The total demand for wheat and the total supply of wheat per month in the Kansas City grain market are as follows:

Thousands of	Price per bushel,	Thousands of	Surplus (+)

bushels demanded	$	bushels supplied	or shortage (--)
85	3.40	72	***- 13***
80	3.70	73	*- 7*
75	4.00	75	***0***
70	4.30	77	*+ 7*
65	4.60	79	***+ 14***
60	4.90	81	***+ 21***

a. *Market equilibrium occurs at the point where market clears, that is, where quantity supplied is equal to quantity demanded. In other words, equilibrium price is the price at which there exists neither surplus nor shortage. Looking at the entries in the last column (in bold), we can see the equilibrium price is $4. Therefore, the equilibrium quantity is 75,000 bushels.*

b. *For your individual work.*

c. *At $3.40, there would be a 13,000 bushels shortage of wheat. The price will not stay at that level since it will be in the sellers' best interest to raise their prices.*
At $4.90, sellers will supply 21,000 bushels more than buyers would demand, thus creating a surplus. In order to get rid of the surplus, sellers would have to decrease their price.

d. *The statement is false. A surplus means that at a given price, quantity supplied is greater than quantity demanded. Trying to get rid of the surplus, sellers will decrease their prices. Therefore, surpluses drive prices down, not up. Shortages, on the other hand, give sellers the opportunity to raise prices, hence "shortages drive prices up".*

e. *A ceiling at $3.70 established by the government (which probably tries to prevent the price from being what it perceives as "too high") would not allow the price to move towards the equilibrium. As a result, a permanent shortage of wheat will emerge. Buyers will demand 7000 more bushels of wheat than there is available.*