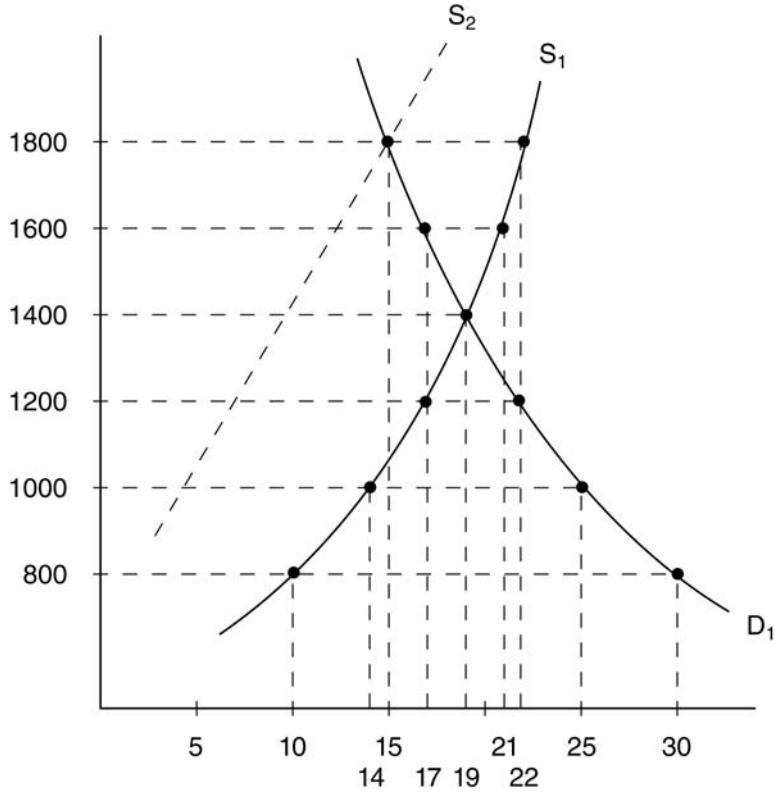
Assignment #2
Economics 101 – Section 5
Due Date: Thursday February 5, 2004

Instructions: Complete all questions and sub questions on separate sheets of paper. Make sure to include your name (first and last) and your student number on the first page of your assignment. Staple all sheets together and turn in to my office by the due date.

#1) The table below represents some hypothetical data for quantities supplied and demanded for studio apartments in Berkeley CA

Monthly rent	Quantity Demanded (1,000's)	Quantity Supplied (1,000's)
$ 800.00	30	10
$ 1,000.00	25	14
$ 1,200.00	22	17
$ 1,400.00	19	19
$ 1,600.00	17	21
$ 1,800.00	15	22

a) Graph the demand and supply curves



b) Using the graph, find the equilibrium price and quantity
p=1,400 q=19

c) Why would we never see equilibrium rent of $800 in this market? Explain using the concepts of excess supply or demand, which ever is appropriate.

- There would be demand of 30,000 and supply of only 10,000 thus there will be excess demand.

d) CA governor Schwarzenegger decides to bulldoze all the rent controlled apartments to cut government costs. How will this affect the equilibrium prices and quantities? Explain using your graph.

Shifts supply left like S_2 above. Higher prices and lower quantities.

#2) The following are some hypothetical data for the quantity of gas demanded and supplied in Iowa per month.

Price per Gallon	Quantity Demanded (000,000 gallons)	Quantity Supplied (000,000 gallons)
$ 1.20	170	80
$ 1.30	156	105
$ 1.40	140	140
$ 1.50	123	175
$ 1.60	100	210
$ 1.70	95	238

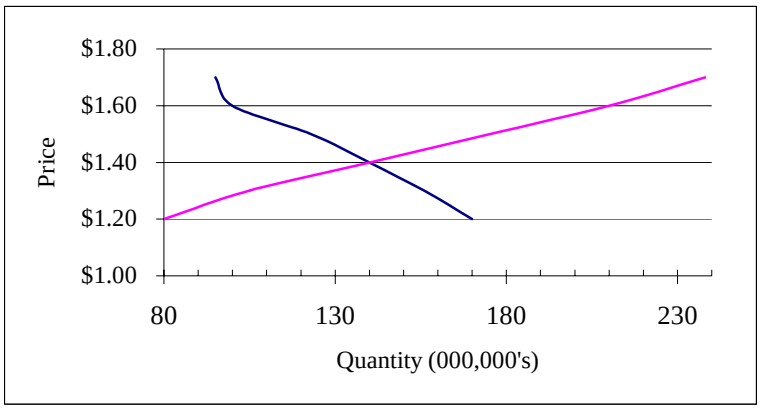
a) Looking at the table, what is the relationship between price and quantity demanded?

Negative

b) Looking at the table, what is the relationship between price and quantity supplied?

Positive

c) Graph the demand and supply curves.

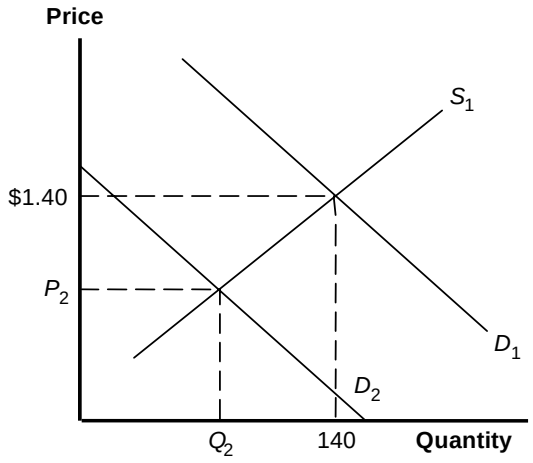


d) What is the equilibrium price and quantity?

Equilibrium price = $1.40; Equilibrium quantity = 140

e) Using your graph, how does a rise in the price of automobiles affect the gasoline market?

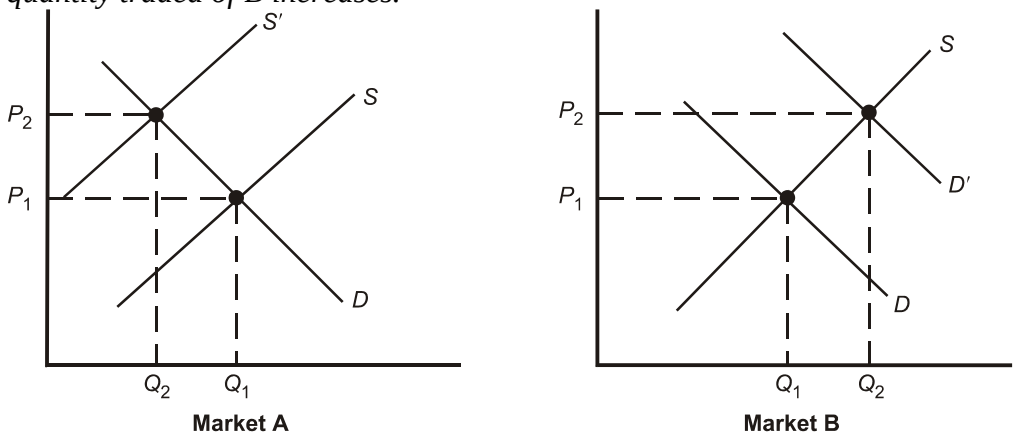
Since cars and gasoline are complements, a rise in car prices will lead to a decline in demand for gas, as illustrated below:



#3) Draw supply and demand diagrams for two markets and label them A and B. Use diagrams to indicate how each of the following will impact prices and quantities in each market:

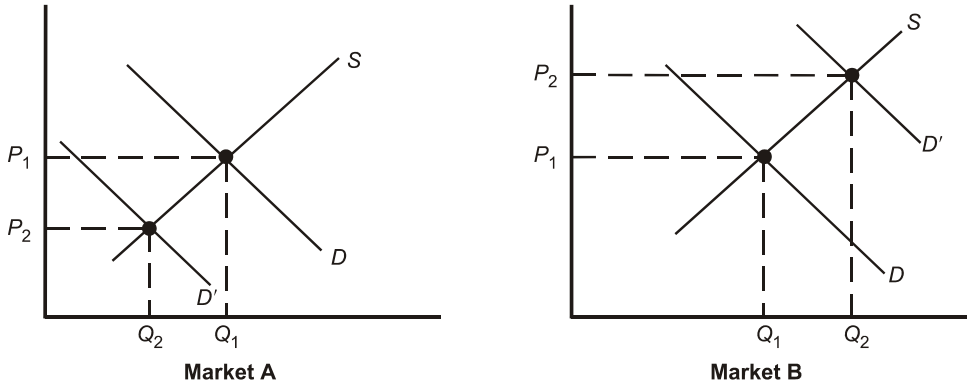
a) A and B are substitutes, and producers expect the price of A to rise in the future.

As the supply of A falls, the price of A rises and the quantity traded of A falls. Consumers respond to the higher price of A by demanding more of B, which is a substitute for A. As the demand for B increases, the price of B increases and the quantity traded of B increases.



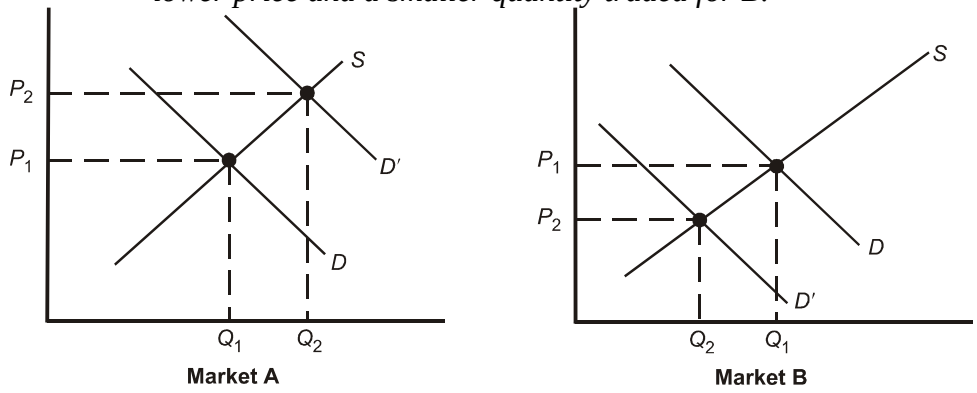
b) A and B satisfy the same kinds of desires (like tea and coffee), and there is a shift in tastes away from A and towards B.

This change in tastes causes the demand for A to fall and the demand for B to rise. These shifts lead to a lower price and a smaller quantity traded for A, and to a higher price and a larger quantity traded for B.



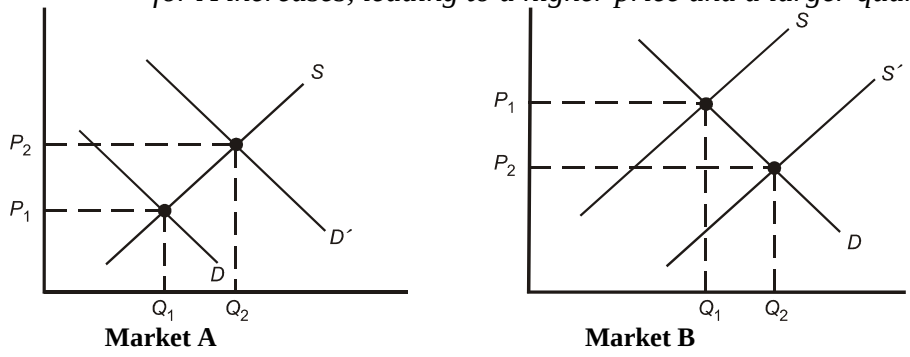
c) A is a normal good, while B is an inferior good. Incomes of all consumers in this market rise.

Higher incomes cause the demand for A to rise and the demand for B to fall. These shifts lead to a higher price and a larger quantity traded for A, and to a lower price and a smaller quantity traded for B.



d) A and B are complements. There is a technological advance in the production of good B.

The technological advance in the production of B causes the supply of B to increase, leading to a lower price and a larger quantity traded for B. As the price of B falls, consumers buy more of B and more of A. Therefore, demand for A increases, leading to a higher price and a larger quantity traded of A.



#4) Suppose that the costs of production of winter hats and wheat in Russia and the US are as follows:

	Per Winter Hat	Per Bushel of Wheat
US	$10	$1
Russia	5,000 rubles	2,500 rubles

a) What is the opportunity cost of producing one more winter hat in the US? In Russia?

The opportunity cost of producing one more winter hat in the United States is 10 bushels of wheat. The opportunity cost of producing one more winter hat in Russia is 2 bushels of wheat.

b) What is the opportunity cost of producing one more bushel of wheat in the US? In Russia?

The opportunity cost of producing one more bushel of wheat in the United States is $^1/_{10}$ of a winter hat. The opportunity cost of producing one more bushel of wheat in Russia is $^1/_2$ of a winter hat.

c) Which country has a comparative advantage in winter hats? In wheat?

Russia has a comparative advantage in winter hats, while the United States has a comparative advantage in wheat.

d) If the US decides to produce one less winter hat and Russia decides to produce one more winter hat, what should happen to wheat production? Show that you understand by filling in the following table. What are the gains from specialization here?

	Winter Hat Production	**Wheat Production (in Bushels)**
United States	–1	**+10**
Russia	+1	**–4**
World	0	**+6**

e) If the exchange rate were 1,000 rubles/$US, would mutually beneficial trade occur? If yes explain. If no, then which direction would the exchange rate move?

	Per Winter Hat	**Per Bushel of Wheat**
United States	$10 (10,000 rubles)	$1 (1,000 rubles)
Russia	5,000 rubles ($5)	2,500 rubles ($2.50)

As you can see in the table, a Russian producer of winter hats would prefer to sell them in the United States, where they can be sold for 10,000 rubles, rather than in Russia where they are sold for 5,000 rubles. Similarly, U.S. wheat producers would prefer to sell their wheat in Russia, where it will fetch $2.50 per bushel, than in the United States at only $1 per bushel. This will lead U.S. farmers to export their wheat to Russia.

(Explanatory note: As more and more winter hats are exported to the United States, their price will drop in the United States and rise in Russia,

until it is equally profitable to sell the hats in either country. For a similar reason, the price of wheat will rise in the United States and fall in Russia, until it is equally profitable to sell wheat in either country. Thus, in equilibrium, Russians will export some—but not all—of the hats they produce. And Americans will export some—but not all—of the wheat they produce.)

f) If the exchange rate were 100 rubles/$US, would mutually beneficial trade occur? If yes explain. If no, then which direction would the exchange rate move?

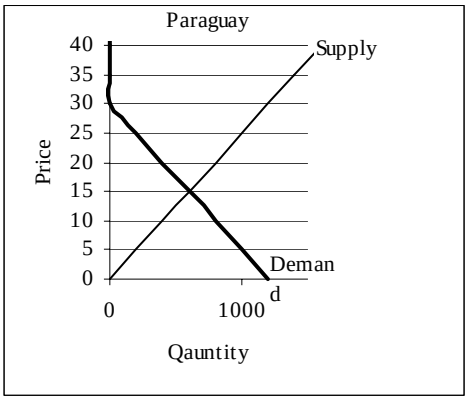
	Per Winter Hat	**Per Bushel of Wheat**
United States	$10 (1,000 rubles)	$1 (100 rubles)
Russia	5,000 rubles ($50)	2,500 rubles ($25)

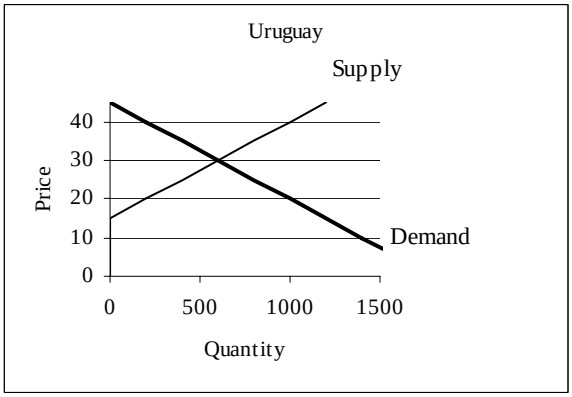
In this case, with the exchange rate at 100 rubles per dollar, a Russian producer of winter hats would prefer to sell them in Russia, where they can be sold for 5,000 rubles, rather than in the United States, where they are sold for only 1,000 rubles. No trade will take place in Russian hats. U.S. wheat producers, however, would prefer to sell their wheat in Russia, where it will fetch $25 per bushel, rather than in the United States at only $1 per bushel. This will lead U.S. farmers to export their wheat to Russia. Now, with Americans exporting goods to Russia, Russians will need dollars to buy them. Americans, on the other hand, will not need rubles at all. Thus, dollars will be scarce and Russians will bid up their prices. The exchange rate will change from 100 rubles per dollar to "more-than-one-hundred" rubles per dollar.

#5) The following is information about the supply and demand for beef in Paraguay and Uraguay. If trade occurs assume a zero transportation cost.

	Paraguay			Uruguay	
Price	Quantity Supplied	Quantity Demanded	Price	Quantity Supplied	Quantity Demanded
0	0	1200	0	0	1800
5	200	1000	5	0	1600
10	400	800	10	0	1400
15	600	600	15	0	1200
20	800	400	20	200	1000
25	1000	200	25	400	800
30	1200	0	30	600	600
35	1400	0	35	800	400
40	1600	0	40	1000	200
45	1800	0	45	1200	0

a) Draw these two figures side-by-side and to scale as in Figure #2 in Chapter 16.





b) In the absence of trade, what is the equilibrium price and quantity in each of these countries?

In Paraguay, the pretrade price is $15; at that price 600 sides of beef are produced and sold. In Uruguay, the pretrade price is $30; 600 sides of beef are produced and sold at that price.

c) If the two countries begin to trade, what will happen to the price of beef? How many units of beef will be purchased in Paraguay and how many in Uruguay at this price?

The equilibrium posttrade price is $22.50. In Paraguay, 300 sides of beef are purchased at that price; 900 are purchased in Uruguay.

d) How many sides of beef will be produced in each country? What is the difference in each country between production and consumption (purchases)?

In Paraguay, 900 sides of beef are produced; in Uruguay, 300 are produced. A total of 600 sides of beef are exported from Paraguay to Uruguay.

e) Who benefits and who loses from the opening of trade between the two countries? Discuss producers and consumers in both countries.

Beef consumers in Paraguay lose (the price of beef there rises), and beef producers in Uruguay lose (the price of beef there falls). Gainers include beef producers in Paraguay, and beef consumers in Uruguay.