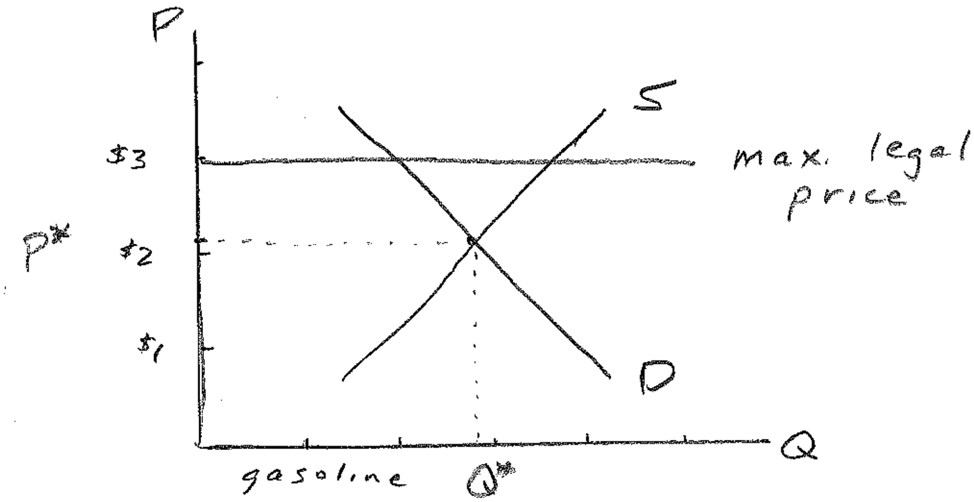
ECO 610
Fall 2016
Problem Set #1 Key

10 pt. total

1. Currently the market price of gasoline is $2.09 per gallon in Lexington. Suppose city council votes to make it illegal for any gasoline retailer to sell at a price higher than $3.00 per gallon, i.e. they impose a price ceiling or maximum price at $3. Illustrate and explain briefly what the effect of this policy will be on the market for gasoline.

3 pts.

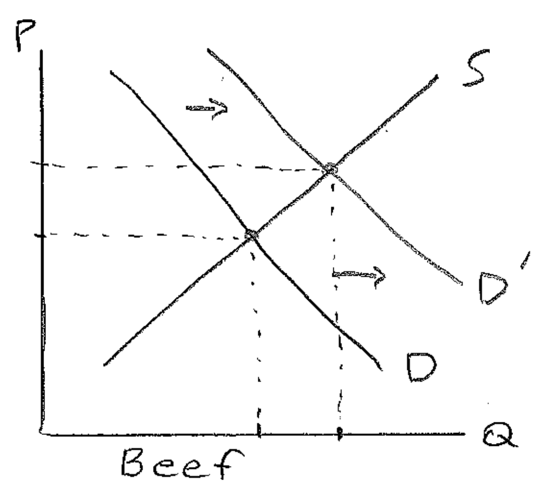
A maximum legal price (a price ceiling) that is set above the market-clearing (equilibrium) price will have no effect on the market outcome. Buyers and sellers will continue to transact at $2.09 per gallon, and there will be no frustrated buyers or sellers. Only if other market conditions change, either shifting demand to the right or supply to the left such that the equilibrium price rises above $3/gallon, will the price ceiling have an effect, i.e. create a shortage.

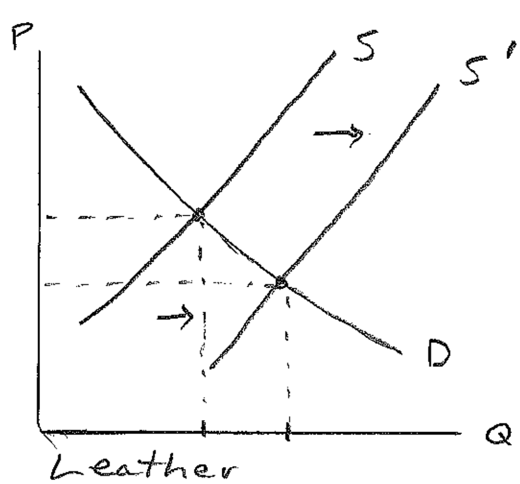


2. From a past WSJ article: "Cattle prices are soaring toward records, pushing up the cost of beef in grocery stores. The gains are being fueled by rising appetites globally. . . . Nations in Asia and elsewhere are buying more U.S. beef." Briefly explain and illustrate using supply and demand analysis what is going on in the market for beef. Then explain and illustrate any secondary effects that you think might occur in the market for leather.

3 pts.

"Rising appetites globally . . . other nations buying more U.S. beef" suggests that the demand for beef has increased, leading farmers to supply more beef at higher prices. A byproduct of been is leather, since both come from a cow. As farmers supply more beef, the supply curve for leather will shift to the right. Leather prices will tend to fall as the quantity exchanged expands.



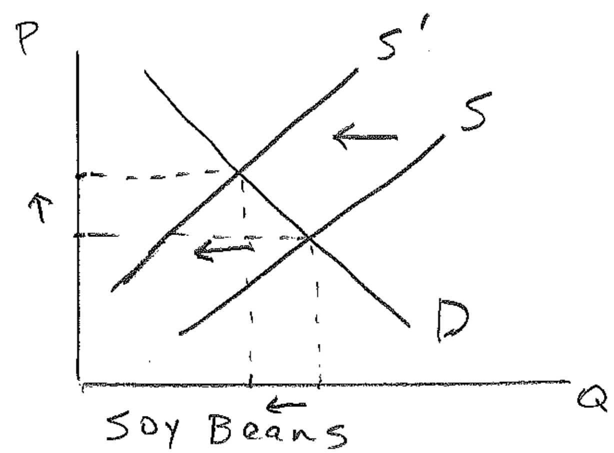


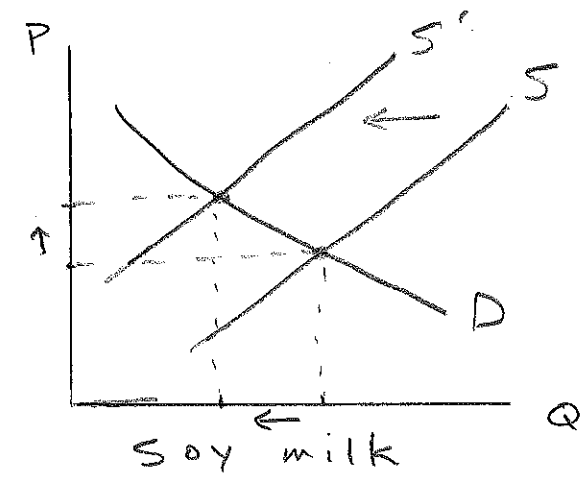
4 pts.

3. Soy milk is a popular substitute for cow's milk, especially for those who are lactose intolerant. The federal subsidy program for ethanol has increased the demand for corn and led to record high corn prices.
   a. Using supply and demand analysis, explain how higher corn prices affect the market for soybeans. Then explain how the market for a soybean-based product like soy milk is secondarily affected by the ethanol program. Illustrate your answers in supply and demand diagrams.
   b. What do you think will happen to the stock price of Blue Diamond, a large almond producer that markets its own brand of almond milk, a close substitute for soy milk. Draw a diagram that supports your answer.

Higher corn prices will prompt farmers to plant more of their land in corn, which means fewer acres planted in soybeans. The supply curve for soybeans will shift to the left. Soybean prices will rise and quantity exchanged of soybeans will fall. Soybeans are the major input in the production of soy milk. An increase in the price of a key input thus shifts the supply curve for soy milk to the left, and soy milk prices will rise. Almond milk is a substitute in consumption for soy milk. As soy milk prices rise, some households will switch to almond milk, illustrated by a shift to the right of the almond milk market demand curve. Both the price and quantity exchanged of almond milk will increase, a good thing for anyone holding stock in Blue Diamond.

(a.)





(b)