Homework #2 (due Tuesday)

1a.) Let $Q_{Dx} = 20 - 2*P_X$ and $Q_{Sx} = 10 + 3*P_X$. What is the mathematical relation between Q_{Dx} and Q_{Sx} at equilibrium? Given that, calculate equilibrium price and quantity.

b.) Calculate Q_{Dx} and Q_{Sx} for a price greater than equilibrium. Is this a shortage or a surplus? Of how many units?

c.) Let supply "shift" to $Q_{Sx}' = 5 + 3*P_X$. Calculate equilibrium price & quantity. What exactly would have happened if price had remained the same as your answer to pt. a?

d.) Draw all of this (carefully).

2.) Complete 2.5 and 2.8 from the questions at the end of B&Z's chapter 2.

3.) A paraphrase of an oldie but a goodie from B&Z's 6th edition: Consider the market for a movie in two towns. For Amherst, $Q_D = 10 - P$ and $Q_s = P$. For Benton, $Q_D = 16 - 2 * P$ and $Q_s = 8 + 2 * P$.

a.) Assume initially that Amherst and Benton are close together but separated by a natural barrier that makes travel between those cities prohibitively expensive—at least, too costly merely to see a movie. Solve for equilibrium price and quantity in Amherst and Benton.

b.) Suppose now that a bridge or tunnel is built that makes travel between the cities completely costless. What is "the market" now? Solve for equilibrium price and quantity overall— and the quantity demanded and quantity supplied in each town.

c.) In general terms, what happens in the market for movies as the cost of travel between the cities increases or decreases?