**EC 3204 Homework 1**

1. The demand and supply curves for coffee are given by Qd = 600 − 2P and Qs = 300 + 4P.
2. Plot the supply and demand curves.
3. Determine the equilibrium price and quantity. Plot those points on the graph.
4. Now suppose that the price of coffee is $70 instead of the equilibrium price you found. What are Qd and Qs? This is not equilibrium, what is it?

2.) From statistical studies, we know that for 1987 the supply and demand curves for cotton produced domestically in the U.S. were given by:

**Qs = 2200 + 180P**

**Qd = 3000 – 220P**

Where quantities are in millions of bales per year and price is in nominal dollars per bale.

a. Calculate the equilibrium price in this market. Plot the supply and demand curves and show this equilibrium price and quantity.

b. Calculate the point price elasticities of demand and supply at this equilibrium.

c. Suppose that in 2017 the demand and supply were given by **Qs = 1460 + 115P** and

**Qd = 2900 – 125P.** Plot these curves on your original diagram. What happened to demand and supply over this time period? What explanations might you give for these changes? What is your new equilibrium price and quantity exchanged? What are price elasticities of demand and supply at the new equilibrium?

d. Think about the market for cotton. What predictions might you make about the supply and demand in the U.S. market over the next 10 years? What will happen to prices? Why? Carefully explain.

1. The market for coffee has recently experienced some shocks. A major frost in Brazil has reduced the coffee crop there, reducing world supply. At the same time, a major coffee chain has launched a viral advertising campaign that has increased demand for coffee. The original supply and demand curves for coffee were Qs = 300 + 4P and Qd = 600 - 2P.
2. The supply decreased by 50 units due to the frost. The new supply equation is Qs = 250 + 4P. Draw this on the original graph and find the new equilibrium price and quantity.
3. Demand increased by 100 units due to advertising. The new demand equation is Qd = 700 - 2P. Draw this on the graph and find the new equilibrium.
4. By how much has the equilibrium price increased from the frost? By how much has equilibrium quantity decreased?

d) By how much has the equilibrium price increased from the advertising? By how much has equilibrium quantity increased?