Homework 2

Due: **IN CLASS, Wednesday, September 17th. Must** be turned in by the end of class. Remember that late homework will not be accepted.

**Graphing Supply and Demand**

This is the instruction sheet and problem list for homework 2. Please read all instructions and problems carefully!

**Instructions:**

1. For each problem, **only** draw the curve(s) specified. If you are only asked to draw a demand curve, just draw a demand curve and DO NOT put a supply curve in the graph. If you are asked to draw both a supply and demand curve, you will need to draw both curves. Since this is a graphing assignment, you can draw your graphs and write your labels. Typing your answers is **not** required.

2. For correct labeling and graphing, refer to the file posted on ANGEL titled "Supply and Demand Graphing" in the “Supplements” folder. In addition, refer to your notes for some helpful examples.

3. **Draw your graphs neatly!** Take your time to make your graphs clear and your writing legible. As such, you may want to practice or do a "first-draft" of your graphs on another sheet of paper before drawing your graphs that you will turn in for your assignment. Note that it may be helpful on some graphs to use multiple colors. It may make it easier for you to see everything.

4. Each graph is worth 2 points, and question #7 is worth 4 points. Drawing arrows in the wrong direction or mislabeling will result in only earning partial credit.

5. **Turn in only the paper with your graphs drawn and labeled.** This file is posted on ANGEL and is titled "Homework 2 Turn-in Sheet". When finished, turn in **just** your graphs that you have drawn. **No instructions, no problem list, no staples. Just one sheet of paper. Write your name and email on the paper.**
Problems: READ THESE CAREFULLY!

Each graph is worth 2 points, except for question #7, which is worth 4 points. This assignment has a total of 16 points.

Don’t forget to label your axes. That’s worth some points, too.

1. Draw a **supply** curve, and assume it is the supply curve for processors. Suppose the price of gold increases. Gold is an input used in the production of processors. Draw what happens to the supply curve for processors. Use arrows and/or labels to clarify where necessary.

2. Draw **supply and demand** curves for bagels. Assuming that bagels are a normal good, draw what would happen if there was an increase in consumer income. Clearly illustrate and label all equilibrium points, prices, and quantities before and after the increase in income.

3. Draw **supply and demand** curves. Clearly draw and label an increase in supply. Clearly illustrate and label all equilibrium points, prices, and quantities before and after the increase in supply.

4. A supply curve is given by \( Q_s = 2 + 4P \). Draw the **supply** curve. You don’t have to draw to scale. Clearly show what happens on this supply curve when the price rises from $6 to $9. Label all appropriate points, as well as numerical values for prices and quantities. Include arrows to clarify.

5. A demand curve is given by \( Q_d = 500 - 16P \). Draw the **demand** curve. You don’t have to draw to scale. Clearly show what happens on this demand curve when the price falls from $14 to $10. Label all appropriate points, as well as numerical values for prices and quantities. Include arrows to clarify.
6. A demand curve and supply curve are given respectively as follows:

\[ Q_D = 450 - 2P \]
\[ Q_S = 10 + 2P \]

Draw both the demand and supply curves, and clearly label the equilibrium as well as numerical values for the equilibrium price and quantity.

7. (Worth 4 points) A demand curve and supply curve are given respectively as follows:

\[ Q_D = 150 - 3P \]
\[ Q_S = 2P \]

Draw both the demand and supply curves, and clearly label the equilibrium as well as numerical values for the equilibrium price and quantity.

On the same graph, draw and label a price of \( P = \$19 \). Find the numerical values for the \( Q_D \) and \( Q_S \) at this price, and clearly label and illustrate the resulting shortage or surplus at this non-equilibrium price. Write the numerical amount of the shortage or surplus as well as labeling it on the graph.