HOMEWORK #3 (PART 1 OF 2)
Due Nov 11 IN CLASS
NO LATE SUBMISSION IS ACCEPTED
Please TYPE and STAPLE your work
Graphs and formulas can be drawn by hand
The number of points here sums up to 10

QUESTION 3.1 (3 pts)
Suppose you have many competitive firms and you know that each of them is producing $Q = 5$ units of output. You also observe that the price on the market is $P = 16$ and ATC(5) = 13.

   a. Draw the firm's diagram with MC, ATC and AVC curves on it (if you don't have enough information to draw some curves, just draw something, but draw it *right*).
   b. Show firm's profit on the diagram and calculate it.
   c. Explain what will happen to this market in the long run. Is long run equilibrium quantity bigger or less than 5? Is long run equilibrium price bigger or less than 16? Explain.

QUESTION 3.2 (3 pts)
Suppose the competitive market for fast food is initially in the long run equilibrium. Graphically represent both the market and a firm in the market for fast food. Suppose a new law is passed taxing each unit sold $1 (Hint: the tax will shift MC, ATC, AVC up by the amount of the tax). What will happen to the market in the short run? What will the firm do in the short run? What will happen to the market in the long run? Add the long run to your picture (you may draw another if you wish).

QUESTION 3.3 (3 pts)
Consider a market for good X. Suppose that the Demand is given by $P = 1 + 2Q$ and Supply is given by $P = 10 – Q$. Draw Supply and Demand on the diagram. Find the equilibrium price and quantity and label them on your graph. Suppose the price on the market is $P = 8$. Calculate Consumer, Producer and Total Surplus. Suppose that you can set the price on the market. What is the maximum amount by which you can increase Total Surplus?

QUESTION 3.4 (1 pt)
Suppose you have two competitive firms and you observe the following information. The supply of the first firm is given by $P = 2 + 2Q$, the supply of the second firm is given by $P = 1 + 3Q$. Find Aggregate Supply of these two firms. Draw it and find equation for it.