Assigment 1: Supply & Demand

Question 1

A study conducted by Yahoo! revealed that chocolate is the most popular flavor of ice cream in America. For each of the following, indicate the possible effects on demand, supply, or both as well as equilibrium price and quantity of chocolate ice cream.

a. A severe drought in the Midwest causes dairy farmers to reduce the number of milk-producing cattle in their herds by a third. These dairy farmers supply cream that is used to manufacture chocolate ice cream.

b. A new report by the American Medical Association reveals that chocolate does, in fact, have significant health benefits.

c. The discovery of cheaper synthetic vanilla flavoring lowers the price of vanilla ice cream.

d. New technology for mixing and freezing ice cream lowers manufacturers' costs of producing chocolate ice cream.

Question 2

In a supply and demand diagram, draw the shift of the demand curve for hamburgers in your hometown due to the following events. In each case, show the effect on equilibrium price and quantity.

a. The price of tacos increases.

b. All hamburger sellers raise the price of their french fries.

c. Income falls in town. Assume that hamburgers are a normal good for most people.

d. Income falls in town. Assume that hamburgers are an inferior good for most people.

e. Hot dog stands cut the price of hot dogs.

Question 3

Let's assume that each person in the United States consumes an average of 37 gallons of soft drinks (nondiet) at an average price of $2 per gallon and that the U.S. population is 294 million. At a price of $1.50 per gallon, each individual consumer would demand 50 gallons of soft drinks. From this information about the individual demand schedule, calculate the market demand schedule for soft drinks for the prices of $1.50 and $2 per gallon.

Question 4

Find the flaws in reasoning in the following statements, paying particular attention to the distinction between shifts of and movements along the supply and demand curves. Draw a diagram to illustrate what actually happens in each situation.

a. "A technological innovation that lowers the cost of producing a good might seem at first to result in a reduction in the price of the good to consumers. But a fall in price will increase demand for the good, and higher demand will send the price up again. It is not certain, therefore, that an innovation will really reduce price in the end."

b. "A study shows that eating a clove of garlic a day can help prevent heart disease, causing many consumers to demand more garlic. This increase in demand results in a rise in the price of garlic. Consumers, seeing that the price of garlic has gone up, reduce their demand for garlic. This causes the demand for garlic to decrease and the price of garlic to fall. Therefore, the ultimate effect of the study on the price of garlic is uncertain."

Question 5

Fans of music often bemoan the high price of concert tickets. One rock superstar has argued that it isn't worth hundreds, even thousands, of dollars to hear him and his band play. Let's assume this star sold out arenas around the country at an average ticket price of $75.

a. How would you evaluate the argument that ticket prices are too high?

b. Suppose that due to this star's protests, ticket prices were lowered to /$50. In what sense is this price too low? Draw a diagram using supply and demand curves to support your argument.

c. Suppose the superstar really wanted to bring down ticket prices. Since he and his band control the supply of their services, what do you recommend they do? Explain using a supply and demand diagram.

d. Suppose the band's next album was a total dud. Do you think they would still have to worry about ticket prices being too high? Why or why not? Draw a supply and demand diagram to support your argument.

e. Suppose the group announced their next tour was going to be their last. What effect would this likely have on the demand for and price of tickets? Illustrate with a supply and demand diagram.

Question 6

In 2016 the price of oil fell to a 12-year low. For drivers, the cost of driving fell significantly as gasoline prices plunged. For the airline industry, the cost of operation also fell significantly because jet fuel is a major expense.

a. Draw a supply and demand diagram that illustrates the effect of a fall in the price of jet fuel on the supply of air travel.

b. Draw a supply and demand diagram that illustrates the effect of a fall in the price of oil on the demand for air travel. (Hint: think about this in terms of the substitutes for air travel, like driving.)

c. Put the diagrams from parts a and b together. What happens to the equilibrium price and quantity of air travel? Despite the fall in the cost of driving, many more Americans chose to fly to their destinations during 2014 to 2016, as incomes rose and people splurged on vacations that had been postponed during the Great Recession.

d. Using your results from part c, modify your diagram to illustrate an outcome in which the equilibrium price of air travel rises as people take more vacations by air.

Question 7

Determine the effect of a market price of $5

$$Q_d = 50 - 3P$$
$$Q_s = 40 + 2P$$