**ECN 100 - Homework Week 2: Demand-Supply Model and Elasticity**

1. A survey indicated that chocolate is Americans’ favorite ice cream flavor.

For each of the following event, indicate the possible effects on demand, supply or both as well as equilibrium price and quantity of chocolate ice cream:

1. 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.
2. A new report by the American Medical Association, AMA, reveals that chocolate does have significant health benefits.
3. The discovery of cheaper synthetic vanilla flavoring lowers the price of vanilla ice cream. Vanilla ice cream is considered as a substitute to chocolate ice cream.
4. New technology for mixing and freezing ice cream lowers manufacturers’ costs of producing chocolate ice cream.

2. Games Industry and Elasticity

a) What do you think the price elasticity of demand of the Games industry is? Elastic or inelastic in demand? Give your reasonings.

b) What do you think the income elasticity of demand of the Games industry is? Normal or inferior? Give your reasonings.

3. Do you think the price elasticity of demand for **Ford SUVs** will increase (more elastic, higher absolute number), decrease (less elastic, smaller absolute number), or remain the same when each of the following events occurs?

1. Other manufacturers, such as GM, decide to make and sell SUVs.
2. SUVs produced in foreign countries are banned from US market
3. Due to ad campaigns, Americans believe that SUVs are much safer than ordinary passenger cars.
4. The time period over which you measure the elasticity lengthens. During that longer time, new models such as 4-wheel drive cargo vans appear.

4. What can you conclude about the price elasticity of demand in each following situation?

1. “The pizza delivery business in this town is very competitive. I’d lose half my sales (customers) if I raised the price by as little as 10%”.
2. I always spend a total of exactly $10 per week on coffee. When price is $2, I buy 5 cups a week, when price increases to $2.50, I buy 4 cups a week.
3. Elasticity of ice cream is 1.2 at current price of $0.50 each, and the current consumption of 100,000 units. Calculate the change in quantity demanded when price rises by $0.05.
4. If the price of a good changes by 30% and quantity demanded for that same good remains unchanged, what is the price elasticity of demand for that good?
5. If price elasticity of supply is 4 and price changes by 10%, by what percent will the quantity supplied change?

 5. In each of the following cases, what will be the effect of a rise in price, in TOTAL REVENUE:

a) Demand is inelastic

b) Demand is elastic

c) Demand is unit elastic.

6. Calculate the price elasticity for each of the following, and then state whether it is elastic, unit elastic, or inelastic; and will revenue rise, decline or stay the same given the change in price. Use the MIDPOINT formula:

a) The price of Boston Red Sox baseball game rises from $10 to $12 a game; the quantity of tickets sold falls from 160,000 to 144,000 tickets.

b) The price of water beds rises from $500 to $600; quantity demanded falls from 100,000 to 80,000.