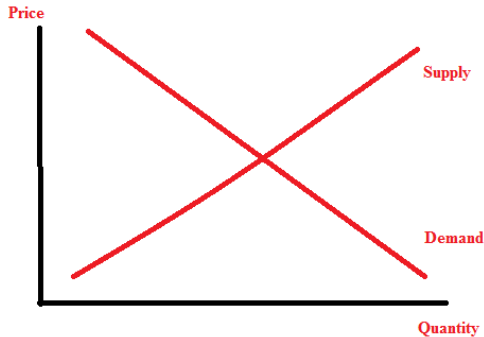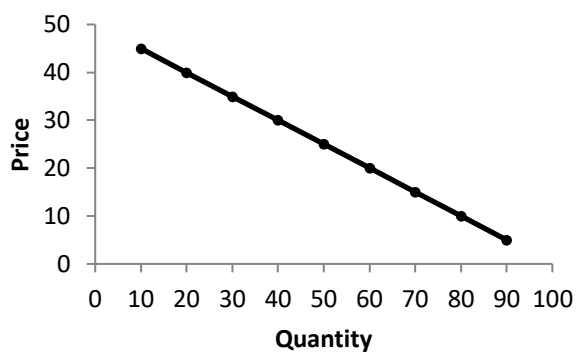# Week #3 Notes – Markets ~ Graphs of Shifts

1.  **Market:** is an arrangement through which buyers and sellers meet or communicate in order to trade goods or services at mutually agreeable prices.

    a. **Demand:** Demand is a relationship between price and quantity demanded by buyers.
    b. **Supply:** Supply is a relationship between price and quantity supplied by sellers.

    

2.  **Demand:** a relationship between the price of an item and the quantity demanded.

    a. **Quantity demanded:** the amount that buyers are willing and able to purchase over a period at a certain price, given all other influences on their decision to buy.
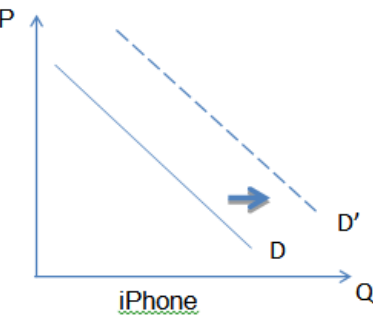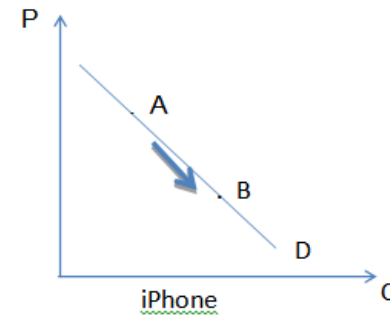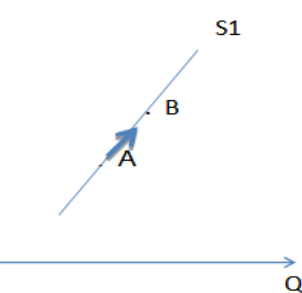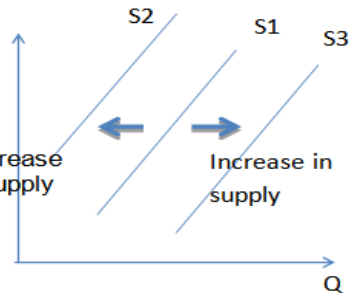
    

    DEMAND SCHEDULE

    | Price | Quantity |
    |-------|----------|
    | 45    | 10       |
    | 40    | 20       |
    | 35    | 30       |
    | 30    | 40       |
    | 25    | 50       |
    | 20    | 60       |
    | 15    | 70       |
    | 10    | 80       |
    | 5     | 90       |

    b. **The Law of Demand:** holding everything else constant *(ceteris paribus condition)*, when the price of a product falls, the quantity demanded of the product will increase, and when the price of a product rises, the quantity demanded of the product will decrease.

    ➔ The law of demand tells us that all the demand curves are *downward slopping* curve.

    c. **Change in Demand:** is a change in the relationship between the *price* of a good and the *quantity demanded* caused by a change in something other than the *price* of a good.

    d. **Change in Quantity Demanded:** Is represented by a movement along a given demand curve caused by an increase or decrease in the *price of a good*.

### e. Change in Demand v.s. Change in Quantity Demanded

| | | |
|---|---|---|
| **Graph** | P (graph, D and D' demand curves, iPhone, arrow showing shift) | P (graph, demand curve D, points A and B, arrow showing movement, iPhone) |
| **Example** | Shift in Demand | Movement along the demand curve |

| | Change in Demand | Change in Quantity Demanded |
|---|---|---|
| **What does it mean?** | The demand curve is shifted | Moving along one demand curve |
| **What cause it?** | Demand shifter changes<br>1. Income<br>2. Price of substitutes or complements<br>3. Taste<br>4. Population and demographics<br>5. Expected future prices | Price of the good we are considering changes |

| | | |
|---|---|---|
| **Graph** | P (graph, S1 supply curve, points A and B, arrow showing movement) | P (graph, S2, S1, S3 supply curves, Decrease in supply, Increase in supply arrows) |
| **Example** | Movement along the supply curve | Shift in supply |

| | Change in Quantity Supplied | Change in Supply |
|---|---|---|
| **What does it mean?** | Moving from one point to another point along one supply curve | The supply curve is shifted |
| **What cause it?** | Only the price of the product changes | Supply shifter changes:<br>1. Price of inputs<br>2. Technological change<br>3. Price of substitutes in production<br>4. Number of firms in the market<br>5. Expected future prices |

3. **Demand Shifting Variables:**
   a. **Income**
      i. **Normal Good:** Consume more when income increases and consume less when income decreases ( Ex: iPhone, ballet ticket)
         ➔increase in income when normal good➔increase in demand
         ➔increase in income when inferior good➔decrease in demand
         ➔decrease in income when normal good➔decrease in demand
         ➔decrease in income when inferior good➔increase in demand

      ii. **Inferior Good:** Consume more when income decreases and consume less when income increases (Ex: canned food, bus)

   b. **Price of Related Goods:**
      i. *Substitutes-goods* used for the same purpose (Ex: Coke and Pepsi)
         ➔Increase in the price of substitute➔increase in demand
         ➔Decrease in the price of substitute➔decrease in demand

      ii. *Complements-goods* are used together ( Ex: coffee and cream)
         ➔Decrease in the price of complements➔increase in demand
         ➔Increase in the price of complements➔decrease in demand

   c. **Taste and preference**

   d. **Population and Demographic**

   e. **Expected future price**
      ➔expectations of a future increase in the item's relative price➔increase in demand
      ➔expectations of a future decrease in the item's relative price➔decrease in demand

4. **Predicting Changes in Price & Quantity:**
   When one of the demand or supply curves shifts, the effect on both the price (P) and quantity (Q) can be determined:

   *An increase in demand (*outward* shift of the demand curve) *increases* P and *increases* Q.

   *A decrease in demand (*inward* shift of the demand curve) *decreases* P and *decreases* Q.

   *An increase in supply (*outward* shift of the supply curve) *decreases* P and *increases* Q.

   *A decrease in supply (*inward* shift of the supply curve) *increases* P and *decreases* Q.

   *What is happens when both curves shift?

   ==NOTE: Supply and supply related lecture notes are omitted here. Analysis of supply is very similar to demand. However, shifters are a bit different. Please refer to week #3 slides and related book chapter.==

5. **Market Equilibrium:** Attained when the price of a good has adjusted so that the quantity demanded is EQUAL to the quantity supplied at that price. Equilibrium price is that which occurs when QD *equals to* QS

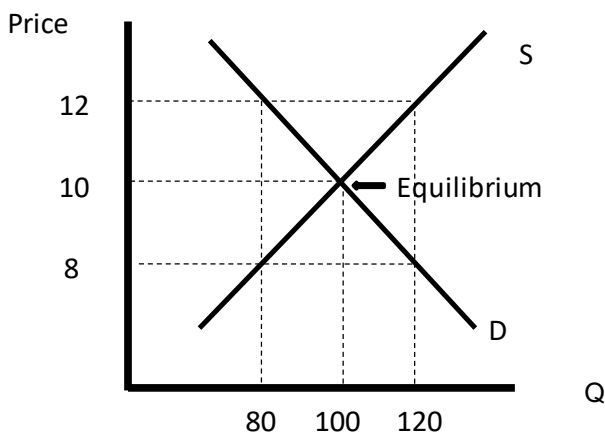➔What happens if the equilibrium price is not set by the market?

6. **Shortage:** The quantity demanded exceeds the quantity supplied; potential buyers bid UP the price.

   *When the price is less than the equilibrium price (QD>QS) there is a *shortage*. If the market is free (unregulated), then, some buyers will be willing to pay more than the prevailing price in order to ensure that they can get the good. This puts upward pressure on the price and eventually brings the market to equilibrium.

7. **Surplus:** The quantity supplied exceeds the quantity demanded; potential buyers bid DOWN the price.

   *When the price is greater than the equilibrium price (QS>QD) there is a *surplus*. If the market is free (unregulated), then, some sellers will accept lower prices to sell their inventories. This puts downward pressure on price, eventually bringing the market to equilibrium.

   ➔The graph below shows a market initially in equilibrium at a price of $10 and quantity of 100 units.



If the price were at $12, the quantity demanded would equal 80 and the quantity supplied would equal 120. There would be a surplus in this market

If the price were at $8, the quantity demanded would equal 120 and the quantity supplied would equal 80. There would be a shortage in this market.