Assignment 1

1. Draw a circular-flow diagram. Identify the parts of the model that correspond to the flow of goods and services and the flow of dollars for each of the following activities.
    a. Selena pays a storekeeper $1 for a quart of milk.
    b. Stuart earns $8 per hour working at a fast-food restaurant.
    c. Shanna spends $40 to get a haircut.
2. An economy consists of three workers: Larry, Moe, and Curly. Each works 10 hours a day and can produce two services: mowing lawns and washing cars. In an hour, Larry can either mow one lawn or wash one car; Moe can either mow one lawn or wash two cars; and Curly can either mow two lawns or wash one car.
    a. Calculate how much of each service is produced under the following circumstances, which we label A, B, C, and D:
        - All three spend all their time mowing lawns. (A)
        - All three spend all their time washing cars. (B)
        - All three spend half their time on each activity. (C)
        - Larry spends half his time on each activity, while Moe only washes cars and Curly only mows lawns. (D)
    b. Graph the production possibilities frontier for this economy. Using your answers to part a, identify points A, B, C, and D on your graph.
    c. Explain why the production possibilities frontier has the shape it does.
    d. Are any of the allocations calculated in part 'a' inefficient? Explain.
3. Suppose, a country has the following production possibility frontier

Rice production	Fish production
0	18
5	16
10	12
15	9
20	0

    a. Using the information provided in the table, draw a production possibility frontier.
    b. If the country does not produce any fish, what is the maximum quantity of rice it can produce? Is this an efficient production?
    c. What is the opportunity cost of increasing fish production from 3 to 12 units?
    d. With the help of a graph explain what will happen to PPF in the following situations: (draw a separate graph for each question)
        I. New labors migrate to the country. They can produce both rice and fish.
        II. The technology of rice production improves
4. Consider the markets for film streaming services, TV screens, and tickets at movie theaters.

a. For each pair, identify whether they are complements or substitutes:
   - Film streaming and TV screens
   - Film streaming and movie tickets
   - TV screens and movie tickets

b. Suppose a technological advance reduces the cost of manufacturing TV screens. Draw a diagram to show what happens in the market for TV screens.

c. Draw two more diagrams to show how the change in the market for TV screens affects the markets for film streaming and movie tickets.

5. What will happen to the equilibrium, equilibrium price and quantity in the market for Levi's Jeans if the following event occurs?
   a. The price of denim cloth decreases
   b. A young group of consumers becomes crazy about Levi's
   c. Rumor is started that leads consumers to believe jeans will be more expensive (producers know the rumor is untrue)
6. The market for pizza has the following demand and supply schedules:

Price	Quantity Demanded	Quantity Supplied
$4	135 pizzas	26 pizzas
5	104	53
6	81	81
7	68	98
8	53	110
9	39	121

   a. Graph the demand and supply curves. What are the equilibrium price and quantity in this market?
   b. If the actual price in this market were above the equilibrium price, what would drive the market toward the equilibrium?
   c. If the actual price in this market were below the equilibrium price, what would drive the market toward the equilibrium?
7. The demand supply schedule for small bangs of potato chips in millions of bags per year is:

Price per bag	Quantity demanded	Quantity supplied
5	160	70
6	150	90
7	140	110
8	130	130
9	120	150
10	110	170

   a. What is the equilibrium price and quantity per week?
   b. How much excess demand or supply exists at a price 6 taka per bag? Show in a diagram
   c. How much excess demand or supply exists at a price 10 taka per bag? Show in a diagram
8. Suppose that business travelers and vacationers have the following demand for airline tickets from New York to Boston:

Price	Quantity Demanded (business travelers)	Quantity Demanded (vacationers)
$150	2,100 tickets	1,000 tickets
200	2,000	800
250	1,900	600
300	1,800	400

a. As the price of tickets rises from $200 to $250, what is the price elasticity of demand for (i) business travelers and (ii) vacationers?
b. Why might vacationers have a different elasticity from business travelers?

9. Studies indicate that the price elasticity of demand for cigarettes is about 0.4. If a pack of cigarettes currently costs $5 and the government wants to reduce smoking by 20 percent, by how much should it increase the price?
10. Two drivers, Walt and Jessie, each drive up to a gas station. Before looking at the price, each places an order. Walt says, "I'd like 10 gallons of gas." Jessie says, "I'd like $10 worth of gas." What is each driver's price elasticity of demand?
11. The accompanying table shows the price and yearly quantity sold of souvenir T-shirts in the town of Pokhara, Nepal according to the average income of the tourists visiting.

Price	Quantity Demanded when Income=20,000	Quantity Demanded when Income=30,000
4	3000	5000
5	2400	4200
6	1600	3000
7	800	1800

a. Using the midpoint method, calculate the income elasticity of demand when the price of a T-shirt is 4 Nepalese Rupees and the average tourist income increases from 20,000 to 30,000 rupees. Also calculate it when the price is 7 rupees. Also answer the following questions for each cases
   - The demand for this product is income elastic / income inelastic.
   - Based on this information, T-shirts would be considered as (luxuries / necessities)
b. Using the midpoint method, calculate the price elasticity of demand when the price of a T-shirt rises from 5 to 6 rupees and the average tourist income is 20,000. Also calculate it when the average tourist income is 30,000.