Solution -

Econ 2016: Principles of Microeconomics

Homework 3 (Total score: 20 Points)

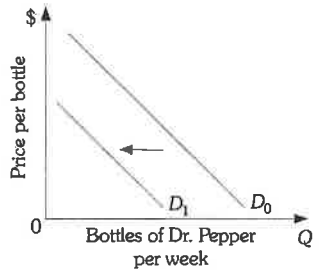
Due Date: Sept 7th, 12:40 PM

1. Multiple Choice (3 points)

1. (1 point) What is the primary difference between income and wealth?
   A. Income is a flow variable; wealth is a stock variable.
   B. Income is the value of what a household owns minus its debt; wealth is a measure of net worth.
   C. Income is earned by households; wealth is gained by inheritance.
   D. Income reveals net worth; wealth is a stock variable.

2. (1 point) As an individual consumes more of a product within a given period of time, it is likely that each additional unit consumed will yield:
   A. successively less satisfaction
   B. successively more satisfaction
   C. the same amount of satisfaction
   D. less satisfaction for a while and then start to add more satisfaction

3. (1 point) Refer to Figure 1. Which of the following would be most likely to cause the demand for Dr. Pepper to shift from D_0 to D_1?
   A. a decrease in income, assuming that Dr. Pepper is a normal good
   B. an increase in the price of 7-UP, assuming 7-UP is a substitute for Dr.Pepper
   C. a decrease in the price of Dr.Pepper
   D. a reduction in the price of sugar used to make Dr. Pepper



2. Short Answer Questions (4 points):

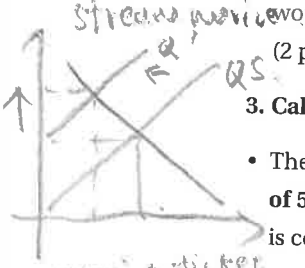
- Please read the following four cases and answer questions.

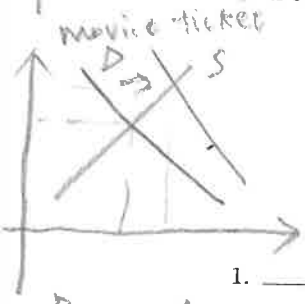
1. Streaming movies and movies shown in theaters are substitutes.
2. Streaming movies and OLED TVs are complements.
3. OLED TVs and movies shown in theaters are normal goods.

4. People watch streaming movies more often in the winter than in the summer

- Most OLED TVs sold in the United States are imported from Asia. If the United States government reduces the number of OLED TVs that can be imported into the United States, when all else equal, the price of OLED TVs would _____ (Increase/Decrease); and the price of streaming movies would _____ (Increase/Decrease). (2 points)

- The number of sites that stream movies is reduced by 25%, reducing the number of streaming movies available, the price of streaming movies would _____ (Increase/Decrease); the price of movie tickets would _____ (Increase/Decrease); the price of OLED TVs would _____ (Increase/Decrease). (2 points)





3. Calculation Questions (13 points):

- The countries of A and B are small nations. Both produce banana and apples. **Each nation has a labor force of 500.** The table below gives production per month for each worker in each country. Assume productivity is constant and identical for each worker in each country.

Table 1: Productivity for each worker

	Banana	Apple
A	5	10
B	2	8

1. _____ has a comparative advantage in the production of banana. (1 points)
2. _____ has a comparative advantage in the production of apples. (1 points)
3. Given that, **without trade**, each country will want to consume an **equal number of banana and apples**.

- How many units of banana that country A will produce? How many apples that country A will produce? Please show your steps. (2 points)

- How many units of banana that country B will produce? How many apples that country B will produce? Please show your steps. (2 points)

- What are the total production for banana? What are the total production for apples? Please show your steps. (1 points)

4. If the countries decide to trade and each country completely specializes, to maximize the total revenue, which country should produce banana? How many banana that country should produce? which country should produce apple? How many apples that country should produce? (4 points)

A

B

$500 \times 1 = 1500$.

$8 \times 500 = 4000$.

5. Through comparing two cases (with vs without trade), how many additional bananas that A and B produced by trading? How many additional apples that A and B produced by trading? Please show your steps. (2 points)

Apples: $4000 - 2466.67 = 1533$

Banana: $2500 - 2466.67 = 33$.