

# ASSIGNMENT 1

Principles of Economics EC 110-001  
6/7/2007

Name: \_\_\_\_\_

by writing my name i swear by the honor code

**Read all of the following information before starting the Assignment:**

- You are not allowed to share your work with other students in the class. This is an individual assignment.
- Show all work, clearly and in order, if you want to get full credit. I reserve the right to take off points if I cannot see how you arrived at your answer (even if your final answer is correct).
- Justify your answers algebraically whenever possible to ensure full credit. When you do use your calculator, sketch all relevant graphs and explain all relevant mathematics.
- Circle or otherwise indicate your final answers.
- Please keep your written answers brief; be clear and to the point. I will take points off for rambling and for incorrect or irrelevant statements.
- This assignment has 5 problems and is worth 100 points. It is your responsibility to make sure that you have all of the answers!
- This assignment is due Monday, June 11 in class.
- Good luck!

**1.** (*20 points*) PROBLEM 1: This question has 5 parts:

**a.** (*4 pts*) PART A: The first chapter discusses 3 categories of Economics principles. Choose one from the category of how people make decisions and summarize it briefly. Give one example different from the ones in the book of how that principle applies to real life.

**b.** (*4 pts*) PART B: The first chapter discusses 3 categories of Economics principles. Choose one from the category of how people interact and summarize it briefly. Give one example different from the ones in the book of how that principle applies to real life.

**c.** (*4 pts*) PART C: The second chapter introduces the Production Possibilities Frontier (PPF). Give an example of an economy that produces only two goods (of your choice) and be sure to draw efficient, inefficient as well as out-of-reach production points. Also discuss how the opportunity cost shapes the PPF; show how economic growth impacts the PPF.

**d.** (*4 pts*) PART D: The third chapter discusses the benefits of trade. Briefly summarize the conditions necessary for two economies that trade with each other to benefit from trade.

**e.** (*4 pts*) PART E: The fourth chapter discusses the market forces of supply and demand. Give an example of a market for a good of your choice and briefly summarize the shapes of supply and demand curves in your economy, as well as the impact of possible variables on the equilibrium outcome.

**2.** (20 points) PROBLEM 2: A small country produces two goods: beer (measured in packs) and potassium (measured in pounds). The country can switch her workers between the production of the two goods, but incurs costs with the retraining and reallocation of workers. Imagine the following combination of production levels:

	A	B	C	D	E	F
<i>Beer</i>	0	30	40	50	60	70
<i>Potassium</i>	35	30	25	20	10	0

**a.** (10 pts) PART A: Draw the PPF of this country and compute the opportunity cost of increasing the number of packs of beer from (a): 30 to 40 and from (b): 50 to 60. Which one is higher? Why?

**b.** (10 pts) PART B: Assume that initially this economy is at point G where it is producing 30 packs of beer and 20 pounds of potassium. Is this point an efficient allocation of resources? If not, what would be the shortest way to full efficiency?

**3.** (*20 points*) **PROBLEM 3:** Assume that in a given year there are 300 working days and each working day has 8 hours. The Japanese economy needs 30 hours to make one car and 150 hours to make one airplane. The US economy needs 50 hours to make a car and 200 hours to make an airplane.

**a.** (*4 pts*) **PART A:** Construct a table analogous to Table 1 of Chapter 3 in the textbook and then graph the production possibilities frontiers of the American and the Japanese economies.

**b.** (*4 pts*) **PART B:** For the United States, what is the opportunity cost of a car? Of an airplane? For Japan, what is the opportunity cost of a car? Of an airplane?

**c.** (*4 pts*) **PART C:** Which country has an absolute advantage in producing cars? In producing airplanes? Which country has a comparative advantage in producing cars? In producing airplanes?

**d.** (*4 pts*) PART D: Without trade, each country produces in the first 1/2 year only cars and in the second half it produces only airplanes. What number of cars and airplanes does each country produce?

**e.** (*4 pts*) PART E: Starting from a position without trade, give an example in which trade makes each country better off.

**4.** (20 points) PROBLEM 4: The market for pizza has the following demand and supply schedules:

<i>Price</i>	Quantity Demanded	Quantity Supplied
\$10	10	60
\$8	20	45
\$6	30	30
\$4	40	15
\$2	50	0

**a.** (5 pts) PART A: Graph the demand and supply curves for pizza. What is the equilibrium price and quantity?

**b.** (5 pts) PART B: If the price were \$8, what problem would exist in the economy? What would you expect to happen to the price?

**c.** (5 pts) PART C: If the price were \$2, what problem would exist in the economy? What would you expect to happen to the price?

d. (5 pts) PART D: Ketchup is a complement (as well as a condiment) for pizza. If the price of pizza rises, what happens to the market for ketchup?

5. (20 points) PROBLEM 5: The market research has revealed the following information about the market for potassium: the demand schedule can be represented by the equation  $Q^D = 80 - 5P$ , where  $Q^D$  is the quantity demanded and  $P$  is the price. The supply schedule can be represented by the equation  $Q^S = 35 + 10P$ . Calculate the equilibrium price and quantity in the market for potassium.

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