Econ 1, Fall 2010

University of California, Berkeley

Your name: _____

GSI's name: _____

Section #: _____

Problem Set #4

Due at the beginning of lecture Wednesday, October 20, 2010

NOTE: To ensure proper grading, write your answers in the area indicated.

Suppose that we have a three person economy—Dharma, Egbert, and Greg—and three commodities to be produced: coffee, yoga lessons, and ceramic plates. The relative daily productivity of the three in making those three commodities is given by the table below:

	Coffee	Yoga	Plates
Dharma	2	5	4
Egbert	2	1	3
Greg	9	1	5

1. Suppose that we are going to specialize—have each person produce one and only one of the commodities. Decide which of the three commodities should be produced by which of the three people, and explain your reasoning.

2. Suppose that we take coffee to be our standard of value—quote the prices of yoga lessons and of ceramic plates in terms of cups of coffee, and suppose that a yoga lesson is worth cu2 (2 cups of coffee) and a ceramic plate is worth cu1 (1 cup of coffee). Does this change your view of the production allocation you had arrived at for problem (1)? Why or why not?

3. Suppose that we take coffee to be our standard of value—quote the prices of yoga lessons and of ceramic plates in terms of cups of coffee, and suppose that a yoga lesson is worth cu2 and a ceramic plate is also worth cu2. Does this change your view of the best production allocation you had arrived at for problems (1) and (2)? Why or why not?

Now consider a larger economy, where workers are of three types: Dharmas, Egberts, and Gregs. Also, let us focus on the supply and demand for ceramic plates, which we assume will be made by Egberts. Suppose that Egberts are willing to make ceramic plates according to the following rule: at a price of zero, they will make zero plates, for every 1-cup-of-coffee increase in the price of plates, they are willing to make ten additional plates.

4. Suppose that demand for plates follows this rule: if plates cost 10-cups-of-coffee, nobody wants to buy any. Each 1-cup-of-coffee reduction in the price of plates leads consumers to want to buy an additional ten plates.
   a. What is the market equilibrium price in this market?
   b. What is the market equilibrium quantity in this market?
   c. What is the consumer surplus in this market?
   d. What is the producer surplus in this market?

5. Like (4), but with a different consumer demand: if plates cost more than 5-cups-of-coffee, nobody wants to buy any. But consumers are willing to buy an unlimited number of plates at a plate price of 5-cups-of-coffee per plate.
   a. What is the market equilibrium price in this market?
   b. What is the market equilibrium quantity in this market?
   c. What is the consumer surplus in this market?
   d. What is the producer surplus in this market?

6. Like (4), but with a different consumer demand: if plates cost 10-cups-of-coffee, nobody wants to buy any. Each 1-cup-of-coffee reduction in the price of plates leads consumers to want to buy an additional five plates.
   a. What is the market equilibrium price in this market?
   b. What is the market equilibrium quantity in this market?

c. What is the consumer surplus in this market?

d. What is the producer surplus in this market?

7. Like (4), but with a different consumer demand: if plates cost 5-cups-of-coffee, nobody wants to buy any. Each 1-cup-of-coffee reduction in the price of plates leads consumers to want to buy an additional ten plates.

   a. What is the market equilibrium price in this market?

   b. What is the market equilibrium quantity in this market?

   c. What is the consumer surplus in this market?

   d. What is the producer surplus in this market?

8. Like (4), but with a different consumer demand: if plates cost 20-cups-of-coffee, nobody wants to buy any. Each 1-cup-of-coffee reduction in the price of plates leads consumers to want to buy an additional three plates.
   a. What is the market equilibrium price in this market?
   b. What is the market equilibrium quantity in this market?
   c. What is the consumer surplus in this market?
   d. What is the producer surplus in this market?

9. Which of the markets in (4) through (8) do you think does the most to advance human happiness? Explain your answer.