

MICROECONOMICS I - Problem Set No.1

0. General directions: a) write your first and last name in CAPITAL LETTERS; b) motivate your answers to the below questions, i.e., write the economic reasoning that led you to answer in the way you did.

1. In the country of Baseballia, the following table describes the number of red socks and white socks that can be produced with an hour of labor in two different cities. Assume that no other inputs are needed.

	Boston	Chicago
Red socks	3	1
White socks	3	2

- (a) If there is no trade, what is the opportunity cost of a white sock in terms of red socks in Boston?
- (b) If there is no trade, what is the opportunity cost of a white sock in terms of red socks in Chicago?
- (c) If the two cities start trading with each other, which city will specialize in the production of white socks and export them?
- (d) What can be said about the price at which trade will take place?

2. Both Spain and Portugal produce either oranges or wine. Labor is the only factor of production. The following table displays the number of working hours required to produce a single unit of each good in the two countries.

	Oranges	Wine
Spain	20 hours	40 hours
Portugal	15 hours	20 hours

- (a) Which country has an absolute advantage in the production of oranges?
- (b) Which country has an absolute advantage in the production of wine?
- (c) Which country has a comparative advantage in the production of oranges?
- (d) Which country has a comparative advantage in the production of wine?

3. How does each of the following events affect the market for *churros*? For each event, show which curve (i.e., demand or supply) has shifted and predict the resulting change in the equilibrium price and quantity.

- (a) A severe drought reduces the wheat harvest and, as a consequence, the overall supply of flour (which happens to be an important ingredient of *churros*).
- (b) *Churros* are found to be the unique source of a newly discovered nutrient.
- (c) The price of *croissants* increases.
- (d) Wages of *churros* fryers increase.
- (e) Rafa Nadal's TV commercials for the new brand "*Los churros del Tenista*" are extremely popular and successful.
- (f) There is a rapid increase in the Spanish population.
- (g) There is a recession and consumers have drastically lower incomes.
- (h) The price of hot chocolate decreases.

4. The market for crime books in Spain is described by the following demand and supply lines:

$$Q_d = 30 - P$$

$$Q_s = P - 2.$$

- (a) Plot a graph describing market equilibrium and find the equilibrium price and quantity.
- (b) If there is an increase in the price of horror books, what is happening to the demand and market equilibrium for crime books?
5. In the market for apartments in Getafe, there are 1,000 identical consumers. Each of them has a demand curve equal to: $Q = 15 - 1.5P$. Moreover, there are 1,000 identical sellers with supply curve equal to: $Q = 1.5P$.
- (a) Express the market demand and supply for apartments. Find the equilibrium price and quantity.
- (b) Assume that the demand curve changes to: $Q = 18,000 - 1,500P$. Does this correspond to a shift to the right or to the left of the demand curve? Which economic phenomena may explain a similar shift? Find the new equilibrium price and quantity.
- (c) Assume that the supply curve changes to: $Q = 2,000 + 1,500P$. Does this correspond to a shift to the right or to the left of the supply curve? Which economic phenomena may explain a similar shift? Find the new equilibrium price and quantity.
- (d) Going back to the original equilibrium in question *a*, what happens if the government introduces a minimum price of 6?
- (e) Going back to the original equilibrium in question *a*, what happens if the government introduces a maximum price of 4?
6. Careful market research has estimated the following demand and supply schedules for the market of cream-cheese bagels in New York:

$$Q_d = 20 - 4P$$

$$Q_s = 10 + 6P.$$

What are the equilibrium price and quantity in this market? How would the following two policies, implemented by the New York City Council, affect the equilibrium price and quantity?

- (a) A legal price ceiling of \$0.5 per bagel (in order to protect the purchasing power of New York residents).
- (b) A legal price floor of \$0.5 per bagel (in order to save the small sellers of bagels from bankruptcy).