**Department of Economics**

**National and Kapodistrian University of Athens**

**International Economics: Theory and Policy– Erasmus/CIVIS Program**

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1st set of exercises: Ricardo theory of comparative advantage

1. Two countries, I and II, produce two goods, A and B, with one factor of production, labor. Country, I possesses 150 units of labor and country II 50 units of labor. In country I, 19 units of labor are needed to produce one unit of A and 15 units of labor to produce one unit of B. In country II, the corresponding coefficients are 5 for A and 10 for B. a) Draw the production possibility curve for each country. b) Which country exports good A and which country exports good B, under the assumption of free trade? c) if 30 units of labor immigrate from country I to country II, which country exports A?
2. Let us assume the following: 10 units of labor are needed to produce one bushel of wine and 20 units of labor to produce one unit of cloth, in England. In Portugal, 1 hour of labor is needed to produce one bushel of wine and 4 units of labor for one unit of cloth. Each country possesses 2000 units of labor.

a) Which country has the relative advantage in the production of wine?

b) How many units is the production of each good before and after trade?

c) What would be the structure of trade if 200 hours of labor immigrated from Portugal to England?

d) What would be the structure of trade if a technological change in England lowered the hours of labor needed to produce one bushel of wine to 4?

e) Draw the excess demand and supply curves for each country.

f) Draw the production possibility curve for the “world” composed of these two countries.

g) Draw the relative supply and demand for the two countries combined as a whole.

h) If one barrel of wine is consumed for one unit of cloth for any relative prices in England, find the quantities initially consumed as well as the quantities exported and imported in England and Portugal if the relative price of cloth prevailing after trade is equal to 3.

1. Let us assume that a small country can produce and consume two goods, A and B. The labor cost of producing one unit of A and one unit of B is 3 and 2 hours, respectively. The country possesses 120 units of labor. If consumers consume 2 units of A for one unit of B, then find

a) the quantities consumed and produced if the price of B is equal to 4, before trade. Also find the price of A and the national income of the country.

b) Suppose the international price of B is 6, while the price of A remains constant. Estimate the national income, the quantities consumed and produced in the country, after trade.

c) In which sector would it be more profitable for the country to invest in technological innovation saving labor, under conditions described in question (b).