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PART II. Problems.

I. Ricardo. (30 points) We are given the following labor input requirements:

| | Cloth | Wheat |
|-----|---------|---------|
| UK | 2 hours | 6 hours |
| USA | 3 hours | 2 hours |

(a) What is the relative price of cloth in terms of wheat in the UK? In the USA? (5 Points)

(b) Where will the free trade price settle post trade? Who will export which good? (5 Points)

(c) If the post-trade relative price of cloth in terms of wheat is equal to $\frac{2}{3}$, show what happens to consumption of cloth and wheat in the US and UK pre and post trade. Use this information to calculate the wage in the USA relative to the UK post-trade. (15 points)

(d) Show that unit labor costs post-trade are consistent with the pattern of trade. (5 points)

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II. Heckscher-Ohlin (20 points)

We are given the following input requirements to produce food and computers:

| | Labor To produce One Unit | Capital to Produce One Unit |
|-----------|---------------------------------|-----------------------------------|
| Food | $a_{LF} = 6$ | $a_{KF} = 3$ |
| Computers | $a_{LC} = 4$ | $a_{KC} = 10$ |

Chile is well endowed with labor, and consequently has a comparative advantage in labor-intensive goods. Chile is considering joining a free trade area with the United States. Prior to joining the free trade area, the price of food (P_f) is 15 and the price of computers (P_c) is 42. After joining the free trade area, the price of food is 21 and the price of computers in Chile is 30.

- (a) What happens to the returns to labor and capital in Chile after it joins the free trade area? (10 points)

- (b) Which theorem is consistent with this result? Why or why not? (10 points)

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III. Trade Policy: An Export Subsidy (25 points)

Home's demand for wheat is given by $D = 100 - 20P$. Its supply curve is $S = 20 + 20P$

Foreign has a demand curve $D^* = 80 - 20P$. It has a supply curve given by $S^* = 40 + 20P$

- A. Find the autarky price in each country without trade. Then calculate the world price with free trade and the volume of trade. (10 points)

- B. Assume that foreign offers exporters an ad valorem subsidy of 0.5 per unit. Calculate the effects on the price in each country and on welfare, for home consumers and producers, for foreign consumers and producers, and for net welfare at home and in foreign. (15 points)

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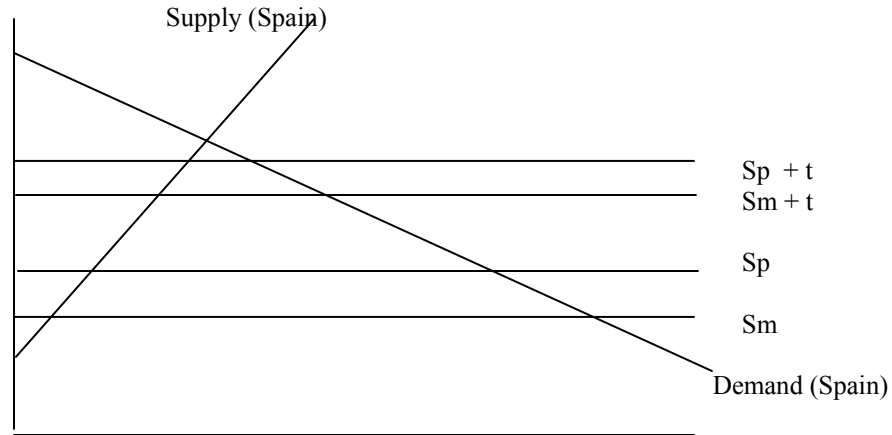
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IV. Trade Policy: Regional Trade Agreements (25 points)

The following diagram represents the Spanish market for tomatoes. Tomatoes are produced in Spain and also in Mexico (m) and Portugal (p). Initially, if Spaniards buy tomatoes that are produced outside Spain, they must pay a tariff t . However, Spain joins a European trade area that includes Portugal, but not Mexico. Answer the following, referring to your diagram, and adding marks as needed.



1. How much will Spain import and from whom before the trade area is formed? Show on the diagram (5 points)
2. How much will Spain import after the trade area is formed and from whom do they import? (Mark this on the graph above). (5 points)
3. Show the net gains and losses associated with the formation of the union. Mark on the graph. (10 points) Is this the case of trade creation or diversion?
4. Suppose that Japan, Korea and China form a trade block. The new trade rules eliminate all trade barriers between the members, and the countries adopt a unified trade policy against non-members. The countries decide also to allow the free flow of factors (labor and capital). What kind of trade arrangement have the countries formed? (5 points)