

EEP C181, Economics 181
Assignment 1
Due Date: Monday, September 15
Beginning of Class

1. We are given the following labor input requirements:

	Cloth	Wheat
UK	4 hours	12 hours
USA	6 hours	4 hours

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

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

(c) If the post-trade relative price of cloth in terms of wheat is equal to $1/3$, 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.

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

2. Home and Foreign invent different technologies to produce tools. The table of unit labor requirements is:

	Home	Foreign
Tools	3	6
Wine	2	3
Cheese	5	3

- Comparative advantage: In which good does Home have the strongest comparative advantage? In which good does Home have the least comparative advantage?
- Trade and wages: if the relative wage rate $w/w^* = 1$, in what goods will home specialize? (Hint: you can ignore the relative size of the labor force in giving your answer)
- Gains from trade: Do both countries benefit from trade? Present an educated verbal argument.
- Transport costs: If transport costs add 50 percent to the price of a good that is shipped from one country to another, how will goods be traded? Will all goods be traded? (Hint: Calculate the total cost of each foreign good to a home consumer and compare it to the cost of the same good when produced at home; then calculate the total cost of a home good to a foreign consumer and compare it to the cost of the same good when produced abroad).

3. Home (no asterisk) and Foreign (asterisk) produce cheese and wine with the following unit labor requirements:

	Home	Foreign
Cheese	$a_{lc} = 8$	$a_{lc}^* = 10$
Wine	$a_{lw} = 4$	$a_{lw}^* = 10$

Home and Foreign have total labor forces of $L=128$ and $L^* = 200$ workers

- Graph each country's production possibility frontier and calculate the opportunity cost of cheese in terms of wine. Which country has an absolute advantage in cheese production, which in wine production? Which country has a comparative advantage in cheese production, which in wine production?
- Using the graph from your preceding answer, draw each country's consumption possibilities in the absence of trade. Calculate the relative prices of cheese in terms of wine in autarky.
- Both countries open up to free trade. Graph the relative world supply of cheese to wine and its response to the relative world price of cheese P_c/P_w based on the unit labor requirements. Provide specific values on the axes.