Economics 462 September 27, 2005
Quiz 1 Professor Parker

Suppose you have two countries, Home and Foreign. Each produces two goods, low-tech goods (X) and high-tech goods (Y), with two factors, unskilled labor (U) and skilled labor (S). Home is relatively S-abundant, good X is U-intensive, and good Y is S-intensive. Factors are imperfect substitutes for each other, but are perfectly mobile between sectors. Output prices are P_X and P_Y, the wage for unskilled labor is W_U, and the wage for skilled labor is W_S. Assume technologies, factor quality, and preferences are identical across countries.

1. Under autarky, which country will have the highest P_X/P_Y ratio? The highest W_U/W_S ratio? Where will the X and Y sectors use the highest S/U ratios?

2. Which country has the comparative advantage in X? Which has it in Y? Why?

3. Under free trade, what would happen to the P_X/P_Y, W_U/W_S, and S/U ratios in each country?

4. Show your answers to #1 and #2 using a three-axis (P_X/P_Y, W_U/W_S, and S/U) graph.

5. For the Home country, draw an Edgeworth allocation box to show the autarky allocation of S and U between the two sectors, and put U on the horizontal axis. Draw the contract curve, and show the S/U ratios in each sector. Then show how this allocation point and the S/U ratios change as Home moves from autarky to free trade.