International Trade in Services Exercise 4 Name:

1. Countries A and B have two factors of production, capital and labor, with which they produce two goods, X and Y. Technology is the same in the two countries. X is capital intensive and country A is capital abundant. Analyze the effects on the terms of trade and the welfare of the two countries of the following:

A. An increase in A's capital stock (show the change in the production possibility frontier and the world relative supply, demand, and price).

B. An increase in A's labor supply (show the change in the production possibility frontier and the world relative supply, demand, and price).

C. Country A subsidizes its exports and that country B imposes a "countervailing" tariff that offsets its effect, so that in the end relative prices in country B are unchanged (describe impact inside each country and the show the changes in the world relative supply, demand, and price)

2. Population in USA: 100, in China: 1000.

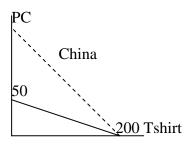
Utility per capita D_i / population.

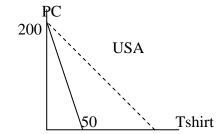
In USA the unit labor requirement for PC is: $\frac{1}{2}$, and for Tshirt is: 2. In China the unit labor requirement for PC is: 20, for Tshirt is: 5.

The opportunity cost and the relative price of Tshirt in terms of PC is: 4 in USA, 1/4 in China.

Assume that consumers in China consume only PC, and those in USA consume only Tshirt.

With trade, USA specializes in the production of PC (200) and China in Tshirt (200). In addition, markets clear when the relative price ($\frac{P_{Tshirt}}{P_{PC}}$) after trade becomes 1.





A. What is the utility per capital before and after trade in USA and in China?

B. Suppose that there has been technological progress in China. The productivity of labor for the production of Tshirt increases from 1/5 to 4/5. Draw the effect on the graph above.

C. What is the effect on the comparative advantage of China and USA? What would be the global production of PC and Tshirt? What would be the new utility per capital in USA and in China?

D. What is the world relative price $(\frac{P_{PC}}{P_{Tshirt}})$ that satisfies "Market Clearing" conditions?

E. Show the derivation of the new consumption possibility frontiers in the graph above.

F. Illustrate the situation using the graph below for the relative world supply and demand, and explain the impact on terms of trade of USA and China.