



PROBLEMS

1. Home has 2,400 units of labor available. It can produce two goods, oranges and pears. The unit labor requirement in orange production is 6, while in pear production it is 4.
 - a. Graph Home's production possibility frontier.
 - b. What is the opportunity cost of oranges in terms of pears?
 - c. In the absence of trade, what would be the price of oranges in terms of pears? Why?
2. Home is as described in problem 1. There is now also another country, Foreign, with a labor force of 1600. Foreign's unit labor requirement in orange production is 10, while in pear production it is 2.
 - a. Graph Foreign's production possibilities frontier.
 - b. Construct the world relative supply curve.
3. Now suppose world relative demand takes the following form: Demand for oranges/demand for pears = price of pears/price of oranges.
 - a. Graph the relative demand curve along with the relative supply curve.
 - b. What is the equilibrium relative price of oranges?
 - c. Describe the pattern of trade.
 - d. Show that both Home and Foreign gain from trade.
4. Suppose that instead of 2,400 workers, Home had 4,800. Find the equilibrium relative price. What can you say about the efficiency of world production and the division of the gains from trade between Home and Foreign in this case?
5. Suppose that Home has 4,800 workers but is only half as productive in both industries as we have been assuming. Construct the world relative supply curve and determine the equilibrium relative price. How do the gains from trade compare with those in the case described in problem 4?
6. "Chinese workers earn only \$.75 per hour; if we allow China to export as much as it likes, our workers will be forced down to the same level. You can't import a \$12 shirt without importing the \$.75 wage that goes with it." Discuss.
7. Japanese labor productivity is roughly the same as that of the United States in the manufacturing sector (higher in some industries, lower in others), while the United States is still considerably more productive in the service sector. But most services are nontraded. Some analysts have argued that this poses a problem for the United States, because our comparative advantage lies in things we cannot sell on world markets. What is wrong with this argument?
8. Anyone who has visited Japan knows it is an incredibly expensive place; although Japanese workers earn about the same as their U.S. counterparts, the purchasing power of their incomes is about one-third less. Extend your discussion from question 7 to explain this observation. (Hint: Think about wages and the implied prices of nontraded goods.)
9. How does the fact that many goods are nontraded affect the extent of possible gains from trade?
10. We have focused on the case of trade involving only two countries. Suppose that there are many countries capable of producing two goods, and that each country has only one factor of production, labor. What could we say about the pattern of production and trade in this case? (Hint: Try constructing the world relative supply curve.)