

ECN 360
Homework #3
Due 9/28/2021

Directions: Answer each question on your own choice of paper. Please be neat! Submit your homework via email to me at: ccdougla@umich.edu A .pdf is preferred, though any file works in practice.

1. Below are four separate cases for the number of hours required to produce 1 unit of S and 1 unit of T for two different countries (Country A and Country B):

Hours of Labor Required to Produce S or T

Case 1

	A	B
S	6	15
T	2	12

Case 2

	A	B
S	10	5
T	4	5

Case 3

	A	B
S	10	8
T	20	4

Case 4

	A	B
S	4	9
T	2	3

- a. For each case, determine the following:
- (i) the pre-trade relative price of S in terms of T (that is, P_S/P_T)
 - (ii) the direction of comparative advantage
 - (iii) the limits to the relative wage rate.
- b. For Case 2, which country would prefer a term of trade of $P_S/P_T = 1.1$ rather than a terms of trade of 2? Explain.
- c. Consider the two countries, A and B, in Case 4. Suppose the wage rate in A, W_A equals \$10 per hour and the wage rate in B, when measured in dollars, $E \times W_B$ equals \$5 per hour (remember Country A is America and Country B is Britain). Calculate the pre-trade price of S and T in both A and B. Is there a basis for mutually beneficial trade? Why or why not? Suppose that W_A rises to \$12 per hour. Everything else held constant, what would happen to trade patterns? Why?

2. Suppose there are 20,000 hours of labor available in Country A. 5 hours of labor are required to produce 1 unit of S, while 4 hours are required to produce 1 unit of T.
 - a. Draw Country A's PPF, putting T on the y-axis and S on the x-axis.
 - b. What is the relative price of S in terms of T? That is, find P_S/P_T
 - c. Suppose the world relative price is 2. That is, in the rest of the world, $P_S/P_T = 2$. What does Country A import and export?
 - d. Suppose A imports 2000 units of the good you said it would import in part c). Using your PPF from part a), illustrate Country A's trade triangle. Assume Country A completely specializes in its comparative advantage good.

3. The data below comes from Table 3.3 in Chapter 3 of the text:

	<u>Country</u>	
	<u>A</u>	<u>B</u>
Soybeans	3	12
Textiles	6	8

Show the effect on world output if each country moved toward specialization in the production of its comparative *disadvantage* good. That is, how much would world output be reduced if each country cut back producing the good in which it did have comparative advantage in by 1 unit in order to produce more of the other good?