

ECON 305
INTERNATIONAL ECONOMICS I

31 October 2007

Key to Exercise 05
Comparative Advantage

1. The following table shows the hours of labor required to produce one unit of each commodity in each country:

CASE I

	Country A	Country B
Commodity X	6	15
Commodity Y	2	12

CASE II

	Country A	Country B
Commodity X	10	5
Commodity Y	4	5

For each of the following cases determine the following:

- a. What are the pretrade autarkic relative prices?

CASE I

Relative price in country A: $P_X / P_Y = 6/2 = 3$

In other words, in country A, $1X = 3Y$

Relative price in country B: $P_X / P_Y = 15 / 12 = 5/4$

Consequently, in country B, $1X = 15 / 12Y$

CASE II

Relative price in country A: $P_X / P_Y = 5/2$
Hence, in country A, $1X = 5/2Y$

Relative price in country B: $P_X / P_Y = 1$
Thus, in country B, $1X = 1Y$

b. What are the direction of comparative advantages?

In **Case I**, Country A has a comparative advantage in the production of commodity Y and Country B has a comparative advantage in the production of commodity X.

In **Case II**, Country A has a comparative advantage in the production of commodity Y and Country B has a comparative advantage in the production of commodity X.

c. What would be the effect on world output if each country would move toward specialization in the production of its comparative advantage good? Show.

CASE I

	Country A	Country B	World Output
Commodity X	-1	+0.8	-0.2
Commodity Y	+3	-1	+2

In order to conclude whether the world reaches a higher or a lower output, we need to know TOT.

Suppose that TOT is $1X = 2Y$.

Then $-0.2X = -0.4Y$.

$(+2 - 0.4)Y = 1.6Y > 0$

The world is better off.

CASE II

	Country A	Country B	World Output
Commodity X	-1	+1	0
Commodity Y	+2.5	-1	+1.5

It is clear from the calculations that the world is better off.

- d. What would be the effect on world output if each country would move toward specialization in the production of its comparative disadvantage good? Show.

CASE I

	Country A	Country B	World Output
Commodity X	+0.3	-1	-0.7
Commodity Y	-1	+1.2	+0.2

In order to interpret the world output result of table, again, we have to know TOT.

Suppose TOT is $1X = 2Y$.

$$-0.7X = -1.4Y$$

$$-1.4Y + 0.2Y = -1.2Y$$

Consequently, the world is worse off.

CASE II

	Country A	Country B	World Output
Commodity X	+0.4	-1	-0.6
Commodity Y	-1	+1	0

In Case II, we can easily see that world output has decreased.