Additional Exercises

The Ricardian Model

1. Suppose Country A and Country B can both produce bicycles and computers.

Assume also that Country A's opportunity cost of a computer is three bicycles, and Country

B's opportunity cost of a computer is five bicycles.

Answer to the following questions:

(a) Which country has a comparative advantage in producing computers?

(b) By implication, what is Country A's opportunity cost of a bicycle?

(c) By implication, what is Country B's opportunity cost of a bicycle?

(d) Which country has a comparative advantage in producing bicycles?

(e) To exploit gains from trade, which country should export computers?

2. Consider two countries, Iowa (*I*) and Nebraska (*N*), which can produce two goods, corn (*C*) and wheat (*W*). Both countries face a tradeoff between these two goods because each has limited resources. Their production possibility frontiers (*PPFs*) curves are shown in Fig. 1

Answer to the following questions:

(a) If *I* produced only corn, how much could it produce?

(b) If *I* produced only wheat, how much could it produce?

(c) If *N* produced only corn, how much could it produce?

(d) If *N* produced only wheat, how much could it produce?

(e) Suppose *I* produces two units of wheat. What is the maximum amount of corn it can

produce while doing so?

(f) Suppose *N* produces sixteen units of wheat. What is the maximum amount of corn it

can produce while doing so?

(g) Plot the points that represent your answers to parts (e) and (f) on the graph in Fig. 1

and label them as *production before trade*.

[Hint: These points must be on their respective production-possibilities curves.]

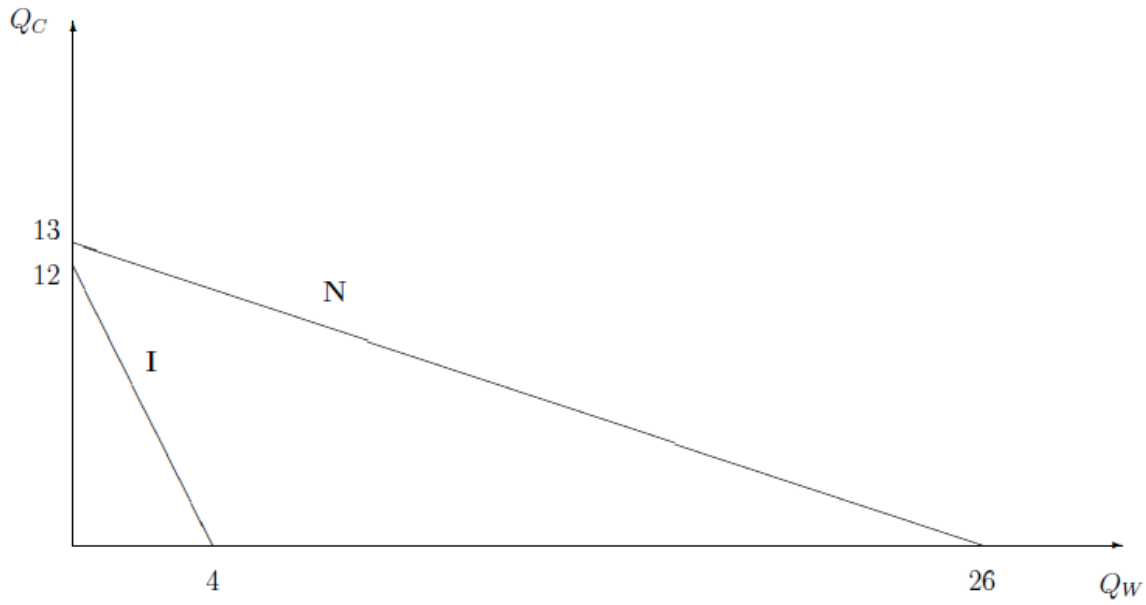

Figure 1

(h) What is *I*'s opportunity cost of a unit of wheat?
[That is, if *I* was already producing somewhere on its PPF and decided to increase production of wheat by one unit, how many units of corn would it have to give up producing?]
(i) What is *N*'s opportunity cost of a unit of wheat?
(j) What is *I*'s opportunity cost of a unit of corn?
[That is, if *I* was already producing somewhere on its PPF and decided to increase the production of corn by one unit, how many units of wheat would it have to give up producing?]
(k) What is the opportunity cost of a unit of corn in *N*?
(l) Which state has a comparative advantage in producing wheat?
(m) Which state has a comparative advantage in producing corn?
(n) Given the levels of production you plotted in part (g), is it possible for *I* and *N* to trade
wheat and corn so that both states can consume combinations of corn and wheat outside
their respective PPFs? Motivate your answer and possibly give an example.

Multiple Choice Questions

1: Countries trade with each other because they are . . . and because of . . . .

a: different, costs
b: similar, scale economies
c: different, scale economies
d: similar, costs
e: None of the above.

2: Trade between two countries can benefit both countries if

a: each country exports that good in which it has a comparative advantage.
b: each country enjoys superior terms of trade.
c: each country has a more elastic demand for the imported goods.
d: each country has a more elastic supply for the supplied goods.
e: Both C and D.

3: The Ricardian theory of comparative advantage states that a country has a comparative advantage in widgets if

a: output per worker of widgets is higher in that country.
b: that country's exchange rate is low.
c: wage rates in that country are high.
d: the output per worker of widgets as compared to the output of some other product is higher in that country.
e: Both B and C.

4: In order to know whether a country has a comparative advantage in the production of one particular product we need information on at least ... unit labor requirements

a: one
b: two
c: three
d: four
e: five

5: A country engaging in trade according to the principles of comparative advantage gains from trade because it

a: is producing exports indirectly more efficiently than it could alternatively.
b: is producing imports indirectly more efficiently than it could domestically.
c: is producing exports using fewer labor units.
d: is producing imports indirectly using fewer labor units.
e: None of the above.

6: Given the following information (in terms of unit labor requirements):

Country	Cloth	Widgets
Home	10	20
Foreign	60	30

a: Neither country has a comparative advantage.
b: Home has a comparative advantage in cloth.
c: Foreign has a comparative advantage in cloth.
d: Home has a comparative advantage in widgets.
e: Home has a comparative advantage in both products.

7: If the Home economy suffered a meltdown, and the Unit Labor Requirements in each of the products tripled (that is, go to 30 for cloth and to 60 for widgets) then home should

a: export cloth.
b: export widgets.
c: export both and import nothing.

d: export and import nothing.
e: All of the above.

8: If wages were to double in Home, then Home should:
a: export cloth.
b: export widgets
c: export both and import nothing.
d: export and import nothing.
e: All of the above.

9: In a two product two country world, international trade can lead to increases in
a: consumer welfare only if output of both products is increased.
b: output of both products and consumer welfare in both countries.
c: total production of both products but not consumer welfare in both countries
d: consumer welfare in both countries but not total production of both products.
e: None of the above.

10: A nation engaging in trade according to the Ricardian model will find its consumption bundle
a: inside its production possibilities frontier.
b: on its production possibilities frontier.
c: outside its production possibilities frontier.
d: inside its trade-partner's production possibilities frontier.
e: on its trade-partner's production possibilities frontier.

11: If a very small country trades with a very large country according to the Ricardian model, then
a: the small country will suffer a decrease in economic welfare.
b: the large country will suffer a decrease in economic welfare.
c: the small country will enjoy gains from trade.
d: the large country will enjoy gains from trade.
e: None of the above.

12: If the world terms of trade for a country are somewhere between the domestic cost ratio of H and that of F, then
a: country H but not country F will gain from trade.
b: country H and country F will both gain from trade.
c: neither country H nor F will gain from trade.
d: only the country whose government subsidizes its exports will gain.
e: None of the above.

13: If the world terms of trade equal those of country F, then
a: country H but not country F will gain from trade.
b: country H and country F will both gain from trade.
c: neither country H nor F will gain from trade.
d: only the country whose government subsidizes its exports will gain.
e: None of the above.

14: According to Ricardo, a country will have a comparative advantage in the product in which its

a: labor productivity is relatively low.
b: labor productivity is relatively high.
c: labor mobility is relatively low.
d: labor mobility is relatively high.
e: None of the above.

15: In a two-country, two-product world, the statement "Germany enjoys a comparative advantage over France in autos relative to ships" is equivalent to

a: France having a comparative advantage over Germany in ships.
b: France having a comparative disadvantage compared to Germany in autos and ships.
c: Germany having a comparative advantage over France in autos and ships.
d: France having no comparative advantage over Germany.
e: None of the above.

16: Assume that labor is the only factor of production and that wages in the United States equal $20 per hour while wages in Japan are $10 per hour. Production costs would be lower in the United States as compared to Japan if

a: U.S. labor productivity equaled 40 units per hour and Japan's 15 units per hour.
b: U.S. productivity equaled 30 units per hour whereas Japan's was 20.
c: U.S. labor productivity equaled 20 and Japan's 30.
d: U.S. labor productivity equaled 15 and Japan's 25 units per hour.
e: None of the above.