CHAPTER 2

Why Countries Trade

CHAPTER OUTLINE

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B. Demand Conditions and the Terms of Trade

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IX. Trade Under Increasing Opportunity Costs

A. Increasing Costs and the Production Possibilities Frontier — Figure 2.6

B. Production and Consumption without Specialization and Trade — Figure 2.7

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X. Dynamic Gains from Trade
- economic growth
- small country benefits
- product variety
- competition policy

TEACHING NOTES AND TIPS

I. Introduction

Notes

The title of the chapter sets up the introduction. The purpose of the chapter is to start to explain the world pattern of trade – who imports what and who exports what. Next we briefly outline the subjects covered in the chapter: international vs. interregional trade, trade in an individual product, absolute advantage, comparative advantage, the gains from trade, and the dynamic gains from trade.

Teaching Tip

You already understand trade. You've been doing it all your life. We're just going to teach you what you "know" in more formal terms.

II. International Trade Versus Interregional Trade

Notes

This section starts out the discussion of trade by focusing on trade within a country.

Teaching Tip

Students, particularly if they are from a "large" country, know a lot more about trade at the start than they think they do. They are observing trade any time they drive on a major highway. It would be difficult for any state or province of a country to prosper without "trading" with other parts of the country. Ask the students to consider what would happen to their welfare if their state did not trade with other states. From there you can lead them to the thought that trade improves welfare. Now they just have to learn more precisely why.

III. Trade in an Individual Product

Notes
The section begins the discussion of international trade by focusing on the effects of trade in an individual product. By initially focusing on one product, the price effects, production effects, and consumption effects of trade can clearly be developed for the student.

Teaching Tip
After developing the price effects, production effects, and consumption effects of international trade one can clearly discuss the benefits and costs associated with international trade. In addition, it is important that students understand Figure 2.1 as it will be used at several points throughout the book.

IV. Trade Based on Absolute Advantage

Notes
This section goes through the standard explanation of mutually beneficial trade based on absolute advantage. A few extra points are worth touching on here. The theory is based on limiting assumptions. Discuss the material found in "PASSPORT: Football Games, Rats, and Economic Theory". We all use "theory", although most of the time the theory is not as "formal" as in economics. Table 2.2 shows that trade makes the *world* better off. The gains from trade are not just country specific. Also, discuss "PASSPORT: Mercantilism." Many students enter this course with the vague feeling that trading with other countries may not improve welfare. We aren't born with this bias so it must have come from somewhere. The boxed feature "PASSPORT: Mercantilism" is designed to show where this bias came from and why it is wrong.

Teaching Tip
It is a good idea to mention that absolute advantage is *really* important in another context. The average level of output per worker in a country roughly determines GDP per capita. Absolute advantage is not just important for international trade. One point to add is that the mercantilists had income and wealth confused. Ask the students what they would rather have: a gift of $1 million with the catch that they can never earn any more income or a job that guarantees them $75,000 per year for life. They'll get the point that income is more important than wealth.

V. Trade Based on Comparative Advantage

Notes
Table 2.3 is the usual setup to make comparative advantage obvious. Table 2.4 is designed to put some "real world" feel into the concept of comparative advantage. Table 2.5 shows how trade increases world output. The Passport on "Labor Costs As A Source of Comparative Advantage" details the pitfalls of confusing low wages with comparative advantage.

Teaching Tip
Paul Samuelson once said that comparative advantage is one of few things in economics that is true but not obvious.

VI. Trade Based on Opportunity Costs

Notes
This section answers the question why comparative advantage exists based on the general concept of opportunity costs. Table 2.7 shows how trade beats autarky. Table 2.9 indicates what happens to the distribution of the gains from trade as the ratio of machines to cloth changes.

Teaching Tip
Trade is about as close to a free lunch as one can find in economics: more goods for the same level of effort.

VII. The Production Possibilities Frontier and Constant Costs

Notes
This section employs standard graphical analysis in Figures 2.2 and 2.3 to demonstrate visually that trade allows a country to consume outside its production possibilities frontier. The graphs allow you to draw a "picture" of autarky vs. free trade and the gains from the latter. You can then show the importance of the terms of trade. In the end, the analysis leads to a complete specialization solution.

Teaching Tip
It is important for students to understand that the graphical analysis is designed to re-enforce the idea that trade gives us more goods for the same level of effort. The end of the analysis, complete specialization, is *not* some ridiculous result. Ask your students what would happen if their state had an "industry" in everything they wanted to consume. Complete specialization is not a bad thing but a welfare improving circumstance.

VIII. The Terms of Trade

Notes
The point here is that demand determines the prices at which exchange occurs. Relative demand determines that and plausibly is based on differences in income. The boxed feature "PASSPORT: The Commodity Terms of Trade" shows how the concept normally is used and some of the pitfalls of using price indexes this way.

Teaching Tip
A good point to make is that the activities of business people will virtually guarantee that international trade will improve the welfare of both countries.

IX. Trade Under Increasing Opportunity Costs

Notes
This section modifies the previous section by introducing the usual concept of increasing costs. Again you can show that trade is better than autarky. The real difference is that both countries do not completely specialize.

Teaching Tip
In the real world, what you're doing is moving from the small-country case of the previous section to the large-country case where the latter continues to produce some of the comparative disadvantage good. Neither case is really more or less realistic. You are just covering the cases of Belgium on the one hand vs. Germany on the other.

X. Dynamic Gains from Trade

Notes
This section covers the gains from trade that are difficult to capture from a graph. These include higher economic growth; the importance of trade for a small country; higher quality; and the market-based enforcement of an adequate amount of competition.

Teaching Tip
Mention the huge literature in economics on trade and growth. It is proven beyond any doubt that trade enhances the rate of economic growth. Not trading is an excellent way for a country to stay poor.

BRIEF ANSWERS TO PROBLEMS AND QUESTIONS FOR REVIEW

1. International trade and interregional trade are similar in that countries like regions of a country are not equally capable of producing every good or service they want to consume. Like countries, regions can benefit if each specializes in producing the goods it can produce best and satisfy their other wants and needs by trading for them.

2. According to Adam Smith, international trade was based on the concept of absolute advantage. Under absolute advantage, the structure of trade is determined by a country's ability to produce a good using less resources (lower cost) than another country. The gains from specialization and trade are the increase in world output that results from each country specializing its production according to its absolute advantage.

3. A country can have an absolute disadvantage in the production of all goods if more resources are required to produce every good when compared to another country. Even if a country has an absolute disadvantage in the production of all goods, it will still have a comparative advantage in the production of some goods, if the country can produce a good at a lower opportunity cost than the other country.

4. According to David Ricardo, international trade was based on the concept of comparative advantage. Under comparative advantage, the structure of trade is determined by a country's ability to produce a good at a lower opportunity cost than another country. The gains from specialization and trade are the increase in world output that results from each country specializing its production according to its comparative advantage.

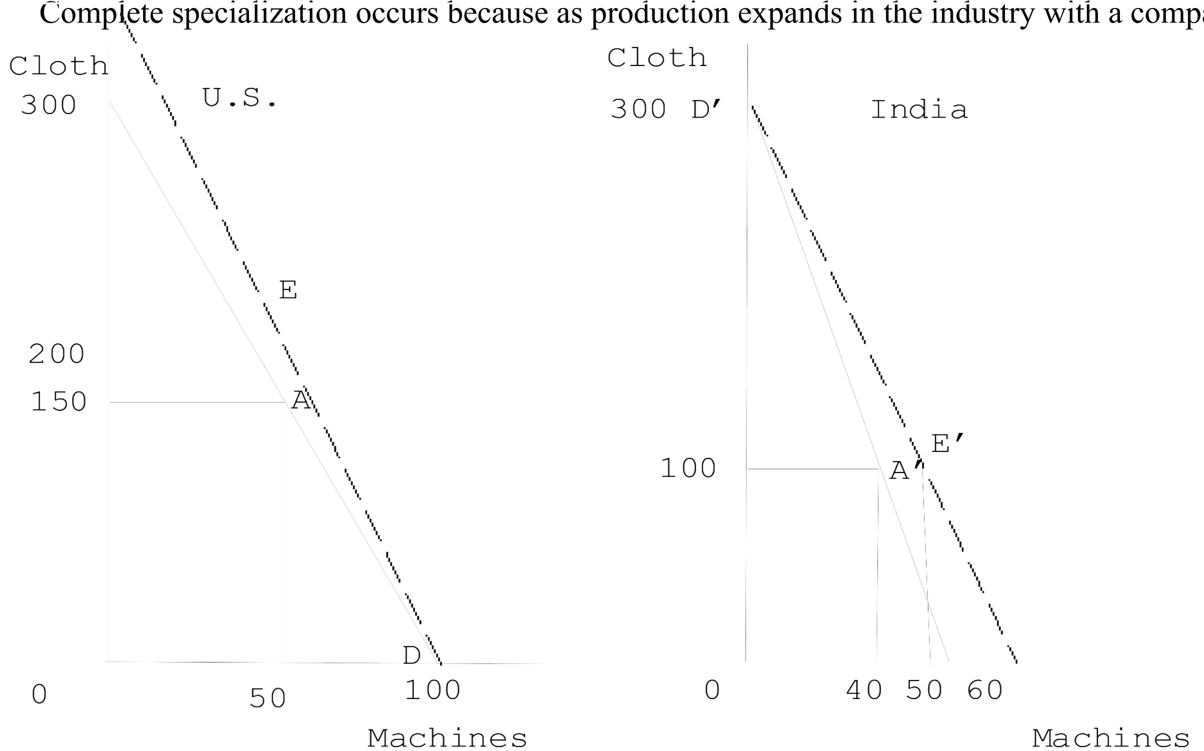
5. With a constant level of world resources, international trade brings about an increase in total world output. International trade causes each country to specialize in the production

of goods in which it has a comparative advantage. In this case, the world uses its resources more efficiently resulting in additional output.

6. Reciprocal demand is defined as the interaction of the demand by two countries for the other country's export good in determining the international exchange ratio. The reciprocal demand theory indicates that the final international exchange ratio or the terms of trade depends on the relative strength of each country's demand for the other country's product. The country with the greater demand for the other country's product will have to sacrifice more of its goods in exchange for that product resulting in a terms of trade that will distribute more of the gains to the country whose goods have a greater relative demand.

7. Given an economy's production possibilities frontier illustrated below, an economy can specialize and trade achieving a consumption point outside its' frontier.

8. Complete specialization occurs because as production expands in the industry with a comparative advantage,



advantage as it produces more of the good.

9. Specialization and trade under increasing cost conditions does not significantly change the conclusions reached concerning the benefits of trade under conditions of constant costs. Specializing and exporting the good in which the country has a comparative advantage and trading for other goods enables both countries to become better off by consuming beyond their respective production possibilities curves. However, production under increasing-cost conditions constitutes a mechanism that forces prices to converge and results in neither country specializing completely in the production of the good in which it has a comparative advantage. In the case of increasing costs, both countries continue to produce both goods after trade.

10. These dynamic gains from trade are the gains from trade that occur over time because trade causes an increase in a country's economic growth or induces greater efficiency in the use of resources. First, a country engaging in international trade uses its resources more efficiently. The resources employed in the industry with a comparative advantage can produce more output, which leads to a higher real GDP. Second, there may be even greater benefits from trade for small countries. Larger potential gains from trade are available in some industries that are subject to increasing returns to scale. Third, international trade not only increases the quantity of the goods we consume but also increases the *quality* of the goods. Fourth, international trade can be a very effective way to enhance competition in a country's domestic market.

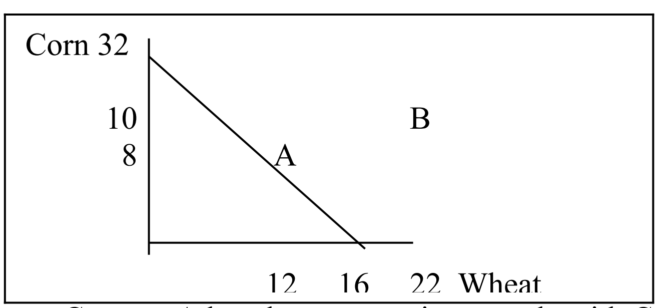
11. Case I: Japanese absolute advantage in corn and disadvantage in wine; Korean advantage in wine and disadvantage in corn
Case II: Japanese absolute advantage in both; Korean disadvantage in both.
Case III: Japanese absolute advantage in corn; Korean disadvantage in corn.
Case IV: Japanese absolute advantage in both; Korean disadvantage in both.

11. a. Case I: Japanese comparative advantage in corn and disadvantage in wine; Korean advantage in wine and disadvantage in corn
Case II: Japanese comparative advantage in corn and disadvantage in wine; Korean advantage in wine and disadvantage in corn.
Case III: Japanese comparative advantage in corn and disadvantage in wine; Korean advantage in wine and disadvantage in corn.
Case IV: Japan and Korea have no comparative advantage.

11. b. In Cases I, II, and III trade is possible. In Case IV, trade is not possible.

11. c.
1. Japan gains 1 wine.
2. Korea gains 2 corn.
3. The range for the terms of trade for mutually beneficial trade are 1C=2W to 1C=.75W.
4. Japan gains 3 wine and Korea gains 1 corn.

12. a.



b. Suppose Country A has the opportunity to trade with Country B at an international exchange ratio of 1 ton of wheat for 1 ton of corn. Assume after trade that Country A consumes 10 tons of corn.

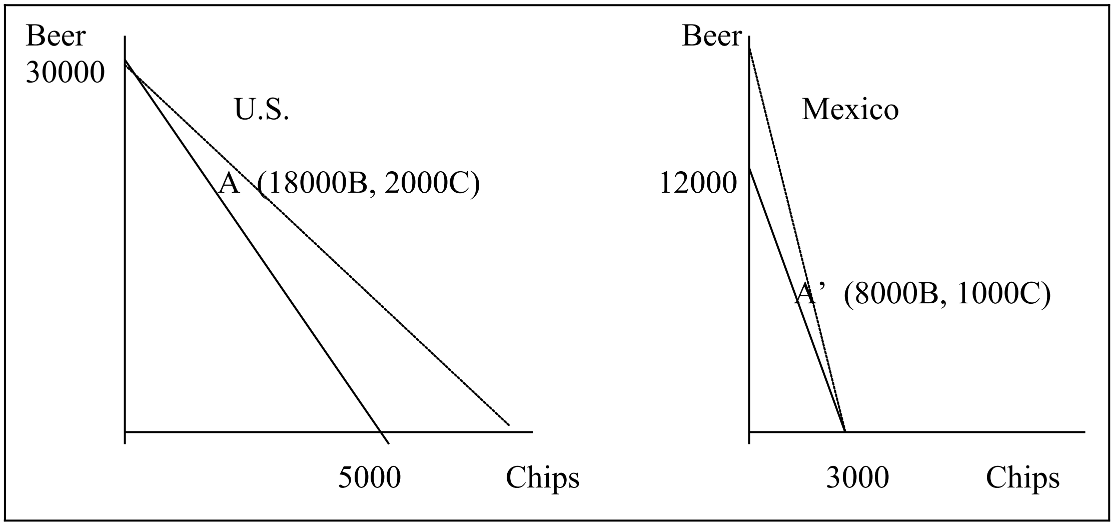
b.1. 32 tons of corn

b.2. 10 tons of corn and 22 tons of wheat, shown at point B.

b.3. 2 corn and 10 wheat

13.

a.



b. MRT U.S. is 6B=1C. MRT Mexico 4B=1C. The U.S. should produce beer and Mexico should produce chips. An additional 4,000 beers are produced

c. Yes, both the U.S. and Mexico gain 2,000 beers.

MULTIPLE-CHOICE QUESTIONS

1. Which of the following statements is true?
   a. International trade is nothing like interregional trade.
   * b. International trade and interregional trade occur for similar reasons.
   c. International trade is bad for a country.
   d. Interregional trade occurs only in the U.S.

2. International trade in a single product:
   a. would tend to lower the price in the exporting country.
   b. would tend to increase the price in the importing country.
   * c. would tend to increase the price in the exporting country.
   d. would not affect the price in either country.

3. Which of the following statements is false?
   a. The price of traded good rises in the exporting country.
   b. The production of the traded good rises in the exporting country.
   * c. The production of the traded good falls in the importing country.
   d. The price of the traded good rises in the importing country.

4. Adam Smith stated that trade was:
   a. a zero sum game.
   b. to be controlled by government to maintain a surplus.

* c. beneficial to all countries.
d. beneficial to large countries that can reduce costs.

5. The Mercantilists believed:
* a. that international trade was a zero-sum game.
b. that international trade was an n-sum game.
c. that maximizing a country's imports would improve its welfare.
d. that exports were detrimental to a country's economy.

6. Which of the following is not true about the Mercantilists?
a. Wealth was equated with holdings of gold and silver.
b. A trade deficit was bad.
c. A trade surplus was good.
* d. Trade was considered to be an n-sum game.

7. The economic philosophy that favors strict limits on imports and strong support for exports is called:
a. zero sum.
b. autarky.
* c. mercantilism.
d. comparative advantage.

8. The Mercantilists advocated:
a. lower labor costs to increase exports.
b. tariffs and quotas to reduce imports.
c. trade policies designed to cause an inflow of gold.
* d. All of the above

9. The theory that suggests that a country's wealth is based on the amount of gold it holds is called:
a. absolute advantage.
* b. mercantilism.
c. comparative advantage.
d. factor-proportion.

10. Specialization and trade by countries based on absolute advantage results in:
a. a faster depletion of the world's resources.
b. products produced at higher cost.
* c. the world using its resources more efficiently causing an increase in world output.
d. the world using its resources more efficiently causing a decrease in world output.

11. Absolute advantage is a trading principle that states that:
    a. differences in resources endowments determine comparative advantage.
    b. differences in incomes determine comparative advantage.
*   c. absolute cost differences determine the basis for trade.
    d. relative cost differences determine the basis for trade.

12. The theory of absolute advantage developed by Adam Smith was based on the assumption that:
    a. capital was the only factor of production.
*   b. labor was the only factor of production.
    c. capital and labor were the only factors of production.
    d. absolute advantage was a myth.

13. Smith's theory of absolute advantage is based on:
*   a. the labor theory of value.
    b. opportunity costs.
    c. absolute theory of value.
    d. capital theory of value.

14. What proportion of international trade is based on absolute advantage?
    a. None
*   b. Some
    c. Most
    d. All

15. Which of the following economists showed that international trade was mutually beneficial based on the concept of absolute advantage?
*   a. Adam Smith
    b. David Ricardo
    c. James Ingram
    d. Paul Samuelson

16. Which of the following economists discovered the basic idea of comparative advantage?
    a. John Maynard Keynes
*   b. David Ricardo
    c. Paul Samuelson
    d. Milton Friedman

17. If a country has a(n) _____ advantage in the production of a particular good, its opportunity cost of producing that good is lower than the opportunity cost for the trading partner for producing the same good.
*   a. comparative
    b. absolute
    c. interim
    d. mercantilist

18. An economy without international trade is an economy in a state of:

a. disequilibrium.
b. economic depression.
* c. autarky.
d. economic expansion.

19. An economy that does not trade is referred to as an economy in a state of:
a. macroeconomics.
b. institutional decay.
* c. autarky.
d. unnecessary simplification.

20. If a country has lower overall productivity levels than its trading partners, then:
a. it will be unable to export.
b. it will have a trade deficit.
c. it will not be able to obtain gains from trade.
* d. it will have a lower standard of living than its trading partners.

21. To say that the U.S. possesses a comparative advantage over Japan in the production of certain types of music implies that (for a similar quality of music) the:
a. opportunity cost of production is less in Japan.
b. absolute cost of production is less in the U.S.
c. absolute cost of production is less in Japan.
* d. opportunity cost of production is less in the U.S.

22. When economists talk about the gains from trade, they mean that:
a. no one ever gets hurt by trade.
* b. the benefits of trade outweigh the losses.
c. business firms benefit from trade but not necessarily individuals.
d. trade increases government revenue through taxes on imports.

23. According to the theory of comparative advantage, the most important benefit of trade is:
a. more jobs.
* b. a more efficient allocation of resources.
c. trade surpluses.
d. increased exports.

24. When country A uses fewer resources to produce a product than another country, then:
a. country A has a comparative advantage in the production of the product.
* b. country A has an absolute advantage in the production of the product.
c. country A has a comparative disadvantage in the production of the product.
d. country A has an absolute disadvantage in the production of the product.

25. If a country has an absolute advantage in two products and has a comparative advantage in only one product, what should it do?
a. Produce both products and export them to maximize its returns.
* b. Specialize in the product it has a comparative advantage in and import the other.

c. Produce both products and export the cheapest and import the most expensive.
d. Produce both products and export the most expansive and import the cheapest.

26. Gains from specialization and trade are basically:
* a. what a country can consume after trade beyond what it can consume before trade.
b. short-term gains that must be reinvested immediately.
c. long-term gains that are not as good as domestic production.
d. what a country can trade without losing its absolute advantage.

27. Haircuts and carpet cleaning are goods that are not really viable for international trade. They are therefore known as _____ goods.
a. import-competing
b. export-competing
* c. nontradeable
d. exchange control

28. Construction and carpet cleaning are goods that are not really viable for international trade. They are therefore known as _____ goods.
a. exchange controls
b. import-competing
c. autarkial
* d. nontradeable

Output per unit of Labor

	Scooters	Picture Frames
Holland	8	2
U.S.	5	2

29. Based on the information above, if the two countries specialize and trade the U.S. will export _____ and Holland will export _____ .
a. scooters, scooters
b. scooters, picture frames
* c. picture frames, scooters
d. picture frames, picture frames

30. With free trade, the minimum limit on the amount paid for one picture frame is _____ scooters.
a. 0.25
b. 0.80
* c. 2.50
e. 4.00

31. Which of the following is a viable world price for one scooter?
    a. 0.8PF
    b. 2.2PF
*   c. 0.3PF
    d. 8.5PF

Answer questions 32. – 36. based on the following information. A worker in the U.S. can produce either 5 machines per day or 15 yards of cloth. A worker in India can produce either 1 machine per day or 5 yards of cloth.

32. Which of the following statements is false?
    a. India has a comparative advantage in the production of cloth.
    b. The U.S. has a comparative advantage in the production of machines.
    c. The U.S. has an absolute advantage in the production of machines.
*   d. India has a comparative advantage in the production of machines.

33. Which of the following statements is true?
    a. India has an absolute advantage in the production of machines.
    b. The U.S. has an absolute advantage in neither machines nor cloth.
*   c. The U.S. has a comparative advantage in machines.
    d. The U.S. has a comparative advantage in cloth.

34. In India the price of machines in terms of cloth (marginal rate of transformation) is:
*   a. 1M = 5C.
    b. 1M= 4C.
    c. 1M= 3C.
    d. 1M = 2C.

35. In the U.S., the price of machines in terms of cloth (marginal rate of transformation) is:
    a. 1M = 1C.
    b. 1M = 2C.
*   c. 1M = 3C.
    d. 1M = 4C.

36. Trade between India and the U.S. would definitely occur where the price of machines in terms of cloth (terms of trade) is:
    a. 1M = 2C.
*   b. 1M = 4C.
    c. 1M = 6C.
    d. 1M = 7C.

37. If Dutch labor can produce 3 soda pops or 5 yogurt cones in a day, while British labor can produce 2 soda pops and 4 yogurt cones, then _____ has a comparative advantage in yogurt cones.

* a. the U.K.
b. the Netherlands
c. both the U.K. and the Netherlands
d. There is not enough information to answer this question.

Assume that a unit of labor in Bulgaria can produce 12 brooms or 15 hats per day. For Albania assume that a unit of labor can produce 18 brooms or 24 hats per day.

38. In Bulgaria the price of brooms in terms of hats is:

* a. 1B = 1.25H.
b. 1B = 1H.
c. 1B = .75H.
d. 12B = 18H.

39. _____ has a comparative advantage in the production of brooms and _____ has a comparative advantage in the production of hats.

a. Bulgaria, Bulgaria
* b. Bulgaria, Albania
c. Albania, Albania
d. Albania, Bulgaria

Answer questions 41. – 43. based on the following information. A worker in the U.S. can produce either 10 chips or 20 sodas per day. A worker in Mexico can produce either 20 chips or 60 sodas per day.

40. Which of the following is true?

a. The U.S. has an absolute advantage in the production of chips.
b. The U.S. has a comparative advantage in the production of sodas.
c. The U.S. has an absolute advantage in the production of sodas.
* d. The U.S. has a comparative advantage in the production of chips.

41. Which of the following is false?

* a. Mexico has an absolute disadvantage in the production of chips.
b. Mexico has a comparative advantage in the production of sodas.
c. Mexico has an absolute advantage in the production of chips.
d. Mexico has a comparative disadvantage in the production of chips.

42. Which of the following is true?

a. The cost of chips in terms of sodas in the U.S. is 1C=3S.
b. The cost of chips in terms of sodas in the U.S. is 1/3C=1S.
c. The cost of chips in terms of sodas in the Mexico is 1C=2S.
* d. The cost of chips in terms of sodas in the U.S. is 1C=2S.

43. Which of the following would be the best ratio for Mexico in terms of the gains from trade?

* a. 1C = 2.1S
b. 1C = 2.3S
c. 1C = 2.5S
d. 1C = 2.7S

Consider the information below for Namibia and Malaysia to answer questions 44. – 46.

Namibian labor:	16 baskets/day or 4 lamps/day
Malaysian labor	20 baskets/day or 8 lamps/day

44. Each country specializes in the good for which it maintains a comparative advantage. In this example, Namibia will specialize in _____ and Malaysia will specialize in_____.

a. baskets, baskets
* b. baskets, lamps
c. lamps, lamps
d. lamps, baskets

45. Which of the following is a viable world price for one lamp?

a. 1.75 baskets
b. 2.10 baskets
* c. 3.85 baskets
d. 4.25 baskets

46. Free trade between these two countries will create winners and losers. For Namibia, the losers will be those associated with _____ production; for Malaysia the losers will be those associated with _____ production.

a. basket, basket
b. lamp, lamp
* c. lamp, basket
d. basket, lamp

Consider the data in the following table.

	Output per worker per day	
Country	Computers	Bushels of Wheat
A	10	50
B	15	30

47. Referring to the table above, Country A has an absolute advantage in the production of:

a. computers.
* b. wheat.
c. both computers and wheat.
d. neither computers nor wheat.

48. Referring to the table above, Country B has a comparative advantage in the production of:
* a. computers.
  b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

49. Referring to the table above, Country A has a comparative advantage in the production of:
  a. computers.
* b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

50. Referring to the table above, when trade opens up between Countries A and B, Country A should specialize in producing:
  a. computers.
* b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

51. Referring to the table above, when trade opens up between Countries A and B, Country B should specialize in producing:
* a. computers.
  b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

52. Referring to the table above, the opportunity cost of producing a computer in Country A is:
  a. 50 bushels of wheat.
  b. 30 bushels of wheat.
  c. 10 bushels of wheat.
* d. None of the above

53. Referring to the table above, the opportunity cost of producing a computer in Country B is:
  a. 50 bushels of wheat.
  b. 30 bushels of wheat.
  c. 10 bushels of wheat.
* d. 2 bushels of wheat.

54. Referring to the table above, mutually beneficial trade will occur between the two countries so long as a computer trades for:
    a. 1 bushel of wheat.
    b. 2 bushels of wheat.
*   c. 4 bushels of wheat.
    d. 5 bushels of wheat.

55. Referring to the table above, Country A gains most from trade if a computer trades for:
*   a. 2 bushels of wheat.
    b. 3 bushels of wheat.
    c. 4 bushels of wheat.
    d. 5 bushels of wheat.

56. Referring to the table above, Country B gains most from trade if a computer trades for:
    a. 2 bushels of wheat.
    b. 3 bushels of wheat.
    c. 4 bushels of wheat.
*   d. 5 bushels of wheat.

57. If the U.S. can produce a combination of 10 shirts or 10 TVs and Mexico can produce a combination of 9 shirts or 5 TVs, then what should the U.S. do?
    a. The U.S. should produce both shirts and TVs and export them to Mexico.
    b. The U.S. should export shirts to and import TVs from Mexico.
*   c. The U.S. should import shirts from and export TVs to Mexico.
    d. The U.S. should not trade with Mexico because they are self-sufficient.

Consider the data in the following table.

	Output per worker per day	
Country	Computers	Bushels of Wheat
A	10	40
B	5	30

58. Referring to the table above, Country A has an absolute advantage in the production of:
    a. computers.
    b. wheat.
*   c. both computers and wheat.
    d. neither computers nor wheat.

59. Referring to the table above, Country B has a comparative advantage in the production of:
    a. computers.
*   b. wheat.
    c. both computers and wheat.
    d. neither computers nor wheat.

60. Referring to the table above, Country A has a comparative advantage in the production of:
* a. computers.
  b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

61. Referring to the table above, when trade opens up between Countries A and B. Country A should specialize in producing:
* a. computers.
  b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

62. Referring to the table above, when trade opens up between Countries A and B. Country B should specialize in producing:
  a. computers.
* b. wheat.
  c. both computers and wheat.
  d. neither computers nor wheat.

63. Referring to the table above, the opportunity cost of producing a computer in Country A is:
  a. 40 bushels of wheat.
  b. 30 bushels of wheat.
  c. 6 bushels of wheat.
* d. 4 bushels of wheat.

64. Referring to the table above, the opportunity cost of producing a computer in Country B is:
  a. 40 bushels of wheat.
  b. 30 bushels of wheat.
* c. 6 bushels of wheat.
  d. 2 bushels of wheat.

65. Referring to the table above, which of the following would be a mutually acceptable terms of trade: 1 computer for:
  a. 2 bushels of wheat.
  b. 3 bushels of wheat.
  c. 4 bushels of wheat.
* d. 5 bushels of wheat.

66. Referring to the above table, Country A gains most from trade if a computer trades for:
  a. 2 bushels of wheat.
  b. 3 bushels of wheat.
  c. 4 bushels of wheat.
* d. 5 bushels of wheat.

67. Referring to the above table, Country B gains most from trade if a computer trades for:
* a. 4 bushels of wheat.
  b. 5 bushels of wheat.
  c. 6 bushels of wheat.
  d. 7 bushels of wheat.

68. Opportunity cost is:
  a. the dollar cost of producing the goods.
  b. the dollar price paid for final goods and services.
  c. the dollar price associated with using one good in place of another.
* d. the alternative that must be given up in order to get something else.

69. If the terms of trade is between each country's opportunity costs:
  a. there is no basis for trade between the two countries.
* b. both countries would gain from trade.
  c. only one country would gain from trade.
  d. one country would gain from trade, and one country would lose from trade.

70. Which of the following statements is true?
  a. Low wages guarantee that the cost of labor is low.
  b. High wages guarantee that the cost of labor is high.
* c. The cost of labor is determined by the price and productivity of labor.
  d. Labor always is cheaper in poor countries.

71. The limits to mutually beneficial trade are determined by:
  a. the exchange rate.
* b. the opportunity costs of producing the two goods in each country.
  c. tariffs and quotas imposed by the other country.
  d. the terms of trade.

72. The concept of reciprocal demand suggests that:
  a. the country with the greater demand for the other country's product will gain more from trade.
* b. the country with the greater demand for the other country's product will gain less from trade.
  c. that the demand for another country's product does not influence the terms of trade.
  d. that the terms of trade will dictate the amount of debt the country will acquire to purchase the product.

73. If two countries are of unequal size:
 a. the larger country gains more from trade.
* b. the smaller country gains more from trade.
 c. the terms of trade will equal the smaller country's opportunity costs of producing the two products.
 d. none of the above

74. The terms of trade is given by:
 a. the prices paid for all imports.
 b. the prices received for all exports.
 c. the price paid for all domestically produced goods.
* d. the prices received for exports and paid for imports.

75. Given free trade, a small country tends to benefit the most from trade because:
 a. small countries are more productive than large countries.
 b. small countries are less productive than large countries.
 c. small countries have lower incomes than larger countries.
* d. small countries will have terms of trade near the opportunity costs of the large country.

76. Given free trade, a large country tends to benefit the least from trade because:
 a. large countries are more productive than small countries.
 b. large countries are less productive than small countries.
 c. large countries have higher incomes than smaller countries.
* d. large countries will have terms of trade near the opportunity costs of the small country.

77. The commodity terms of trade is calculated by:
 a. (price of exports/price of imports) – 100.
* b. (price of exports/price of imports) * 100.
 c. (price of imports/price of exports) – 100.
 d. (price of imports/price of exports) * 100.

78. If the U.S. export price index is 120 and its import price index is 105, its terms of trade is:
 a. 15.
 b. -15.
* c. 114.2.
 d. 87.5.

79. A decline in the price of imports or a rise in the price of exports will:
* a. improve the terms of trade.
 b. worsen the terms of trade.
 c. have no effect on the terms of trade.
 d. none of the above

80. A deterioration of a country's terms of trade causes that country's welfare to:
 a. improve.

b. deteriorate.
c. remain unchanged.
* d. Any of the above can occur

81. A decline in the price of exports or a rise in the price of imports will:
a. improve the terms of trade.
* b. worsen the terms of trade.
c. have no effect on the terms of trade.
d. none of the above

82. A production possibilities frontier illustrates the maximum amount of two different goods that can be produced if:
* a. society is using all its resources in the most efficient manner possible.
b. the price of both goods is identical.
c. the price of both goods is held constant.
d. low-skilled workers can be prevented from getting jobs.

83. Gains from specialization and trade result in a country consuming:
a. inside its production possibilities frontier.
b. on its production possibilities frontier.
* c. outside its production possibilities frontier.
d. none of the above

84. When a production possibilities frontier is a straight line, production occurs under conditions of:
* a. constant costs.
b. increasing costs.
c. decreasing costs.
d. none of the above

85. In autarky, a country will maximize its standard of living when:
* a. its production point is on the production possibilities frontier.
b. its productions point is inside the production possibilities frontier.
c. its production point is outside the production possibilities frontier.
d. none of the above

86. With free trade under constant costs:
a. neither country will completely specialize its production.
* b. as least one country will completely specialize its production.
c. at least one country will consume inside its production possibilities frontier.
d. none of the above

87. A point on a country's production possibilities frontier indicates:
    a. a level of production that would cause unemployment.
    b. a level of production that is unattainable.
    c. an undesirable level of production.
*   d. a level of production where resources are fully employed.

88. If Japan's economy is subject to constant costs, then its supply curve of automobiles will be:
    a. downward sloping.
    b. upward sloping.
*   c. horizontal.
    d. vertical.

89. According to the law of increasing costs:
    a. the more one is will to pay for resources the larger the level of production.
    b. increasing production of a good will cause the price of the good to rise.
*   c. in order to produce additional units of a good it is necessary to forego. increasingly larger amount of an alternative good.
    d. in order to produce additional units of a good it is necessary to forego a constant amount of an alternative good.

90. When a production possibilities frontier is bowed out from the origin, production occurs under conditions of:
    a. constant costs.
*   b. increasing costs.
    c. decreasing costs.
    d. none of the above

91. If a country is subject to increasing costs, then its production possibilities frontier is:
*   a. concave to the origin.
    b. convex to the origin.
    c. a straight line.
    d. all of the above

92. If Japan's economy is subject to increasing costs, then its supply curve of automobiles will be:
    a. downward sloping.
*   b. upward sloping.
    c. horizontal.
    d. vertical.

93. The slope of a country's production possibilities frontier is called:
    a. the marginal rate of expansion.
    b. the marginal rate of substitution.
*   c. the marginal rate of transformation.
    d. the marginal benefits of trade.

94. Many of the gains from trade occur through a reallocation of a country's existing resources. These are known as the _____ gains from trade.
    a. monetary.
*   b. static
    c. opportunity
    d. dynamic

95. The static gains from trade:
    a. result in an increase in the quality of goods over time.
*   b. are a one time event.
    c. result in the increase in the size of export firms over time.
    d. result in a faster rate of economic growth for countries.

96. Which one of the following is not one of the dynamic gains from trade?
*   a. A country uses its resources more efficiently.
    b. Firms in small countries can grow to the most efficient size.
    c. It may increase the quality of the goods consumed.
    d. Markets in a country may become more competitive.

97. Which of the following is not one of the dynamic gains from trade?
    a. a higher rate of growth of real GDP
*   b. lower product quality
    c. higher product quality
    d. a very effective way to promote competition

98. To gain economic growth from specialization/trade, a country must often reallocate its existing resources. The economic growth that results from this process is often referred to as:
    a. the autarky benefits of specialization.
*   b. the dynamic gains from trade.
    c. the social benefits of saving.
    d. the static gains from trade.

99. Which of the following is not one of the dynamic gains from trade?
    a. greater efficiency in the use of resources
    b. larger gains from trade for small countries
    c. increases in the quality of goods
*   d. a lower rate of growth of GDP

100. The slope of a country's social indifference curve is called:
    a. the marginal rate of expansion.
*   b. the marginal rate of substitution.
    c. the marginal rate of transformation.
    d. the marginal benefits of trade.

TRUE FALSE QUESTIONS

1. F International trade occurs for very different reasons than interregional trade within a country.

2. F International trade occurs for entirely different reasons than trade among the regions of a large country such as the U.S.

3. T There are a large number of institutional differences between domestic trade and international trade.

4. F The only difference between domestic trade and international trade is the existence of tariffs on imported goods.

5. F Trade between Mississippi and Massachusetts occurs for totally different reasons than trade between Brazil and the U.S.

6. T Prices of traded goods fall in the importing country and rise in the exporting country.

7. F Production of traded goods falls in countries that export them.

8. F Importing countries produce more of the goods they import in order to replace those imports with domestic production.

9. F Abstraction is something that only occurs in economic theory.

10. F The Mercantilists advocated that each country should try to create balanced trade by having exports equal to imports.

11. T The Mercantilists believed that international trade was a zero-sum game.

12. F International trade can best be described as a zero-sum game.

13. T The Mercantilists equated wealth with holdings of gold and silver.

14. T The Mercantilists believed that imports were “bad” because they led to an outflow of gold and silver from the country.

15. T Modern international trade theory really started with the publication of Adam Smith’s *The Wealth of Nations* in 1776.

16. F International trade allows the world to use its resources more efficiently but one country’s gains are another country’s losses.

17. F According to Adam Smith, international trade is based on comparative advantage.

18. F In a two-country world, at least one country must lose from trade.

19. T Specialization and trade increase the world's output of goods and services.

20. T A country's ability to produce a specific good with fewer resources than another country determines whether it has an absolute advantage in producing the good.

21. F A country's ability to produce a specific good with fewer resources than another country determines whether it has a comparative advantage in producing the good.

22. F The only reason why countries conduct international trade is that by doing so they can get things they cannot produce themselves.

23. T If every country specializes in what it produces best, more goods will be produced than if each country tries to produce everything for its own needs.

24. F If a country has an absolute advantage in the production of all products then it makes no sense for it to trade with other countries.

25. F Almost all international trade is based on absolute advantage.

26. T Ricardo explained the law of comparative advantage on the basis of the labor theory of value.

27. F The concept of comparative advantage cannot be applied to sports.

28. T Comparative advantage is based on the opportunity costs of producing particular goods.

29. T World output will be maximized when each country produces according to its comparative advantage.

30. F The labor theory of value assumes that labor is only one of the relevant factors of production.

31. F Comparative advantage only applies to international trade.

32. F If the dollar cost of labor in a developing country is 50% less than in the U.S. and the productivity of that labor is equal to productivity in the U.S. than that labor is really more expensive than U.S. labor.

33. F If wages in Malaysia are lower than wages in the U.S., then it will cost less to produce virtually any product in Malaysia.

34. F A country with high wages cannot compete in world markets with countries where wages are low.

35. F A country should never produce a good in which it has a comparative advantage.

36. F A country should never export a product in which it has a comparative advantage.

37. T Reciprocal demand suggests that the actual international exchange ratio at which trade takes place depends on the trading partners interacting demands.

38. T If the terms of trade are not between the opportunity costs for the two countries, then the two countries will have no reason to trade.

39. T The terms of trade between any two countries for two goods must lie between their respective opportunity costs if both countries are to gain from trade.

40. T Limits to mutually beneficial trade are determined by the opportunity costs of producing the two goods in each country.

41. F. An improvement of a country's terms of trade caused by a change in domestic conditions always improves a country's overall welfare.

42. T An improvement of a country's terms of trade caused by a change in international conditions always improves a country's overall welfare.

43. T The terms of trade measures the relationship between the price a country receives for its exports and the price it pays for its imports.

44. F If the price difference for the same good in two countries is large enough, then only one country would gain from trade.

45. F If a large and a small country trade with one another the large country is likely to receive all of the gains from trade.

46. T Assume that the limits to mutually beneficial trade between the U.S. and India are 1Machine = 3Cloth and 1Machine = 5Cloth, respectively. The closer the ratio is to the U.S. ratio of 1Machine = 3Cloth, the better it is for India.

Answer questions 47. – 52. based on the following information. Suppose a worker in Canada can produce either 100 skateboards or 200 jars of peanut butter per day. A worker in Guatemala can produce 200 skateboards or 600 jars of peanut butter per day.

47. T Canada has a comparative advantage in the production of skateboards.

48. T Guatemala has an absolute advantage in the production of peanut butter.

49. F Canada has a comparative advantage in the production of peanut butter.

50. T The cost of skateboards in terms of peanut butter in Canada is 1SB=2PB.

51. T The cost of skateboards in terms of peanut butter in Guatemala is 1SB=3PB.

52. T A price ratio of 1SB=2.9PB would be good for both countries, but better for Canada than Guatemala.

53. T Small countries tend to benefit more from trade because their demand for products from large countries would tend to be lower than the large country's demand for their products.

54. F When two countries trade, it is always true that both countries benefit by exactly the same amount.

55. F If a country does not get at least half of the benefits from trade then it should not engage in trade.

56. T A rough indication of a country's terms of trade is the export price index divided by the import price index times 100.

57. T Countries that avoid trading with other countries are referred to as being in a state of autarky.

58. T A production possibilities frontier graphically represents the maximum output of a country when the supply of resources and technology are constant.

59. F Even with international trade a country must remain inside or on its production possibilities frontier.

60. T International trade allows a country to consume outside its production possibilities frontier.

61. F Constant opportunity costs results in upward sloping supply curves and concave production possibility frontiers.

62. T Constant costs leads countries engaging in trade to completely specialize in the production of the good that they export.

63. T A trading possibilities curve shows the consumption options a country has by specializing in the production of one good and trading or exporting it to obtain the other good.

64. F The dynamic gains from trade and the static gains from trade are the same thing.

65. F The static gains from trade are the gains a country receives over time.

66. T The dynamic gains from trade are especially important for small countries.

67. F Since the dynamic gains from trade cannot be quantified they are relatively unimportant.

68. T An important dynamic gain from international trade is that trade tends to increase the rate of growth of real GDP.

69. T Free trade is a very effective way to increase the level of competition in the domestic market.

SHORT ANSWER ESSAY

1. Suppose that the U.S. imports cloth from India. Describe what will happen to the price and quantity produced of cloth in both countries.

2. Briefly explain the doctrine of mercantilism.

3. What do football games and rats have to do with economic theory?

4. Show how a country could have an absolute disadvantage in the production of a product relative to another country and still have a comparative advantage in the production of the product.

5. Explain how trade will tend to emerge along the lines of comparative advantage.

6. International trade guarantees that countries that engage in trade all benefit by exactly the same amount. Is this statement true or false? Explain your answer.

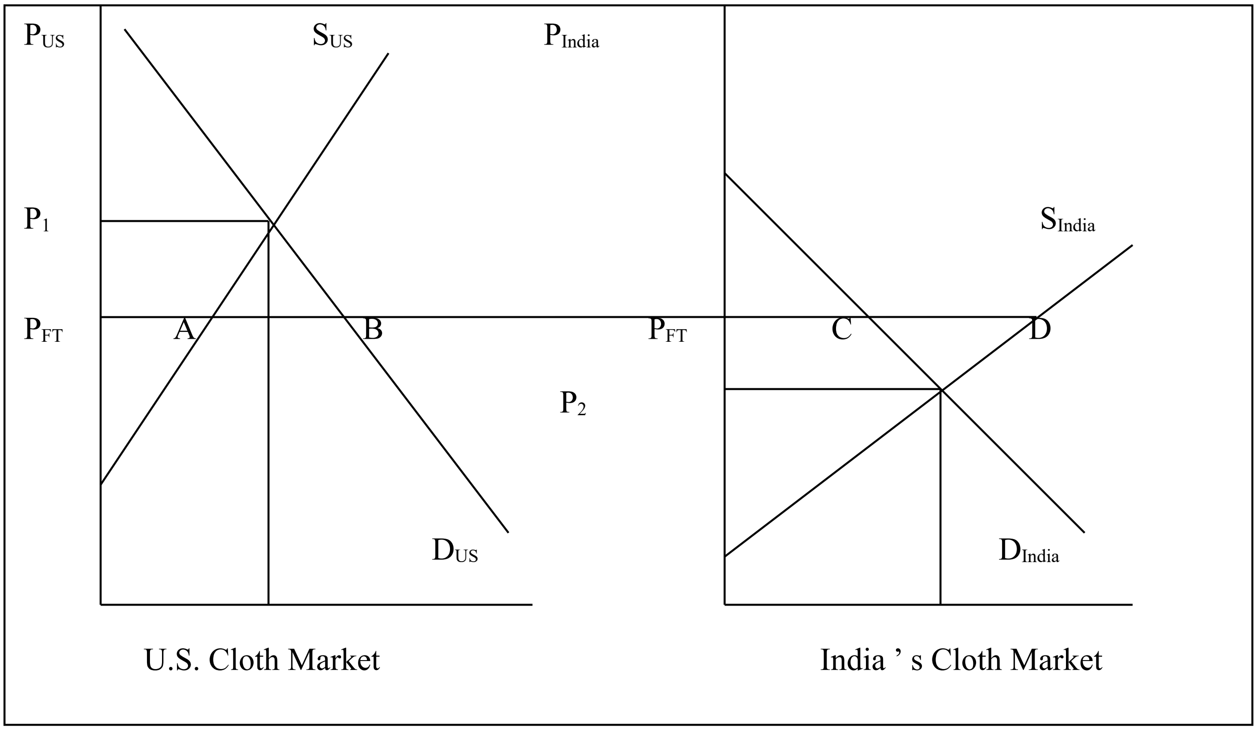
7. Suppose that a country can convert wheat into textiles at a ratio of 3W = 1T. If the country could trade at 2.9W = 1T, it would be better off not trading. Explain why this statement is true or false.

8. What is the commodity terms of trade? Why is it sometimes used as a measure of changes in the gains from trade? Explain some of the problems associated with this sort of use.

9. List and explain the various dynamic gains from trade.

BRIEF ANSWERS TO SHORT ANSWER ESSAY

1. The results of the U.S. importing cloth from India can be seen in the graph below. In the U.S. the price of cloth will decline from P_1 as the supply of domestic cloth is augmented by imports from India. In India, the price of cloth increases from P_2 as some of the domestic production of cloth is exported to the U.S. The consumption of cloth will rise in the U.S. to point B and fall in India to point C. As the price of cloth falls in the U.S., domestic production will fall to point A and be replaced by imports from India. In India, the production of cloth will rise to point D as the price of cloth rises.



2. The doctrine of Mercantilism is based on the premise that a country can promote its self-interest by discouraging imports and encouraging exports in order to increase its wealth. Underlying the mercantilists' view of international trade was the belief that a person's wealth or a country's wealth was based on their holdings of precious metals, which were gold and silver. Because gold and silver circulated as money, a country could increase its wealth by exporting more goods than it imported. This would occur as: exports created inflows of gold and silver and imports created outflows of gold and silver. When a country's exports exceeded its imports, its stock of gold and silver rose, and the country's wealth increased. To encourage a net inflow of gold and silver, the mercantilists advocated regulating international trade in a way that would promote large exports and small imports, meaning a favorable trade balance. To accomplish this, tariffs and quotas would be combined to restrict imports and cheap raw materials and low wages would be used to encourage low-cost exports.

3. Football games and rats help explain the terms "economic theory" and "rationality." Economic theory is not nearly as "unrealistic" or far from reality as it is frequently perceived. The purpose of any theory, economic or otherwise, is to explain and to predict events. Abstraction and formulating a theory is not exclusive to economics. It is something all of us do frequently. Football games are a good example. How many factors can influence the outcome of a football game? Notice how people focus on important factors and "unrealistically" ignore many things that can influence the game's outcome. By economists' standards, even rats are rational. Researchers have found that rats enjoy both root beer and cherry cola. In an experiment, the rats were "charged" for their consumption of these two soft drinks by having to press on a bar to obtain a drink of one or the other. The researchers were able to change the "price" of the two drinks by changing the number of times the rat had to press each bar to obtain one soda or another.

Not surprisingly, as the price of one drink went up the rat would switch its consumption to the other drink. The rats would consume more of the "cheaper" drink and less of the "expensive" drink. Rats are just as rational in their consumption as individuals are in their consumption. The bottom line is that the assumption of rationality is not very "unrealistic".

4. For example, assume that one U.S. worker can produce either 5 machines or 15 yards of cloth per day, and one Indian worker can produce 1 machine or 5 yards of cloth per day. Comparing the two countries, the U.S. has an absolute advantage in the production of both machines and cloth, and India as an absolute disadvantage in the production of machines and cloth. That is, U.S. workers can produce more machines and more yards of cloth than workers in India. In this example, India's absolute disadvantage is smaller in producing cloth than in producing machines. Using Ricardo's logic, when compared to the U.S., India has a comparative advantage in cloth because its degree of absolute disadvantage is lower, and a comparative disadvantage in machines because its degree of absolute disadvantage is higher.

5. Because the opportunity costs of the same goods differ within each country, both countries can benefit from trade. For example, if the U.S. has a comparative advantage in the production of machines and India a comparative advantage in the production of clothe. Traders can buy cloth in India and ship it to the U.S. to sell at a profit. In the same way, traders can buy machines in the U.S. and ship them to India to sell for a profit there. In a real sense, machine producers in the U.S. are, in a roundabout way, also producing cloth and cloth producers in India are similarly machine producers. However, if the price difference for the same goods in the two countries is large enough then both countries gain from trade. Producers in both countries would receive higher prices for their exports than they would for the same goods in the domestic market. Likewise, foreign consumers would be buying imports at prices lower than those prices they would have to pay for the same goods produced domestically.

6. False. The gains from trade are distributed between countries based on the terms of trade. The reciprocal demand theory indicates that the final terms of trade depends on the relative strength of each country's demand for the other country's product. The country with the greater demand for the other country's product will be willing to sacrifice more of its goods in exchange for that product. The resulting exchange ratio will distribute more of the gains from trade to the country whose good has greater demand relative to the demand of the other country. In addition, if the two countries are of unequal size (population or income), it is possible that the larger country's demand would be greater than the smaller country's demand. When this happens the smaller country gains more from trade than the larger country.

7. False. The country can gain 0.1 Wheat for every 1 textile it trades with the foreign country.

8. The most frequently used measure of changes in the gains from trade is the commodity terms of trade. The commodity terms of trade measures the relationship between the average prices a country receives for its exports and the average prices a country pays for

its imports. This measure is calculated by dividing the price index of a country's exports by the price index of its imports. Over time, changes in a country's terms of trade indicate whether a country can obtain more or fewer imports per unit of exports. However, an improvement in a country's terms of trade does not necessarily reflect an improvement in a country's overall welfare. Likewise, deterioration in a country's terms of trade does not necessarily reflect a deterioration in a country's overall welfare. A change in a country's terms of trade may reflect a change in international economic conditions or it may reflect a change in domestic economic conditions. If a country's terms of trade change as a result of a change in international conditions, we can conclude that an improvement in the terms of trade enhances a country's welfare and that a deterioration in the terms of trade is equivalent to a reduction in the country's welfare. If the terms of trade change as a result of a change in domestic economic conditions, the effect on a country's welfare is uncertain. The net effect on total welfare depends on which is larger--the change in the country's welfare due to the change in the terms of trade or the change in the country's welfare due to the change in domestic production. Although changes in the terms of trade do not accurately measure the changes in a country's welfare, business and government officials often use it as a rough indication of how a country is doing in the world economy

9. In addition to the static gains from trade, there may be additional dynamic gains from trade. The dynamic gains from trade are the gains from trade that occur over time because trade causes an increase in a country's economic growth or induces greater efficiency in the country's use of existing resources. First, a country engaging in international trade uses its resources more efficiently by employing resources in the industry with a comparative advantage. This leads to higher real GDP. With faster economic growth, a country can produce even more goods and services over time. The result is that economies that are more open grow faster than the more closed economies, everything else equal. Second, there are greater benefits from trade for small countries. Larger potential gains from trade are available in some industries that are subject to increasing returns to scale. Increasing returns to scale means that as the output of an industry increases, the unit costs of production decline. For industries subject to increasing returns to scale, free trade may allow an industry in a small country the opportunity to expand its production and lower its unit costs. This reduction in costs makes the industry more efficient and allows it to compete in world markets. Third, international trade not only increases the quantity of the goods we consume but may also increase the quality of the goods. Increased competition through trade leads to lower prices, as well as higher quality and greater diversity of the goods we can consume. Fourth, international trade can be a very effective way to enhance competition in a country's domestic market. Foreign competition can be an effective remedy for insufficient competition in the domestic market.