WORLD TRADE

1. In 2013, the United States traded $585 billion with _______, $552 billion with _______, and $480 billion with _______.
   a. China, Canada, Mexico
   b. Canada, Mexico, Japan
   c. Canada, Mexico, China
   d. Canada, China, Mexico
   e. None of the above

2. The National Export Initiative failed in its aim to double U.S. exports from $1,583 billion in 2009 to over $3,000 billion by 2014 (U.S. exports reached only $2,345 in that time frame). Slow growth in U.S. exports could be blamed on:
   a. The euro area & Japan turning back into recession
   b. Decelerated (lower) economic growth in emerging markets
   c. Protectionist policies adopted by China & other trade partners
   d. U.S. policies designed to stimulate exports were inadequate
   e. All of the above

3. Compared to the United States, Texas exports a _______ share of its output and employs _______ skilled workers in export-related jobs
   a. Smaller, higher
   b. Smaller, less
   c. Larger, higher
   d. Larger, less
   e. None of the above

4. Exports from Texas to Mexico were around $94 billion in 2012. Exports from Texas to Canada were around _______ in 2012.
   a. $224 billion
   b. $124 billion
   c. $94 billion
   d. $24 billion
   e. $4 billion
5. GDP was around $1,821 billion for Canada and $2,013 billion for Italy in 2012. U.S. bilateral trade with Canada was around $568 billion in 2012. U.S. bilateral trade with Italy was around _______ in 2012.
   a. $656 billion
   b. $556 billion
   c. $456 billion
   d. $356 billion
   e. $56 billion

6. The size of an economy is directly related to its volume of imports and exports because larger economies
   a. Produce more goods and services, so they have more to sell in the export market
   b. Produce more goods and services, so they are able to buy more imports
   c. Generate more income from the goods and services sold, so they have more to sell in the export market
   d. Generate more income from the goods and services sold, so they are able to buy more imports
   e. a) and d)

7. Europe as a whole trades as much with the United States as does
   a. Mexico
   b. Canada
   c. Japan
   d. Korea
   e. Russia

8. _______ trade occurs between pairs of Canadian provinces than between Canadian provinces and U.S. states, holding distance constant.
   a. Much more
   b. Slightly more
   c. Roughly the same amount of
   d. Slightly less
   e. Much less
RICARDIAN MODEL

9-12 Under free trade with the rest of the world (ROW), the wage paid in the petroleum refining sector is higher than the wage in the vehicle parts sector in Portugal.

9. Portugal produces
   a. Only refined petroleum
   b. Only vehicle parts
   c. Both refined petroleum and vehicle parts
   d. Only refined petroleum or only vehicle parts but not sure which
   e. Nothing

10. Portugal exports
   a. Only refined petroleum
   b. Only vehicle parts
   c. Both refined petroleum and vehicle parts
   d. Only refined petroleum or only vehicle parts but not sure which
   e. Nothing

11. Does Portugal gain from trade?
   a. Yes, Portugal is definitely better off with trade than without
   b. No, Portugal is indifferent between trading and not trading
   c. No, Portugal is definitely worse off with trade than without
   d. Maybe, as Portugal would gain from trade if exports only refined petroleum
   e. Maybe, as Portugal would gain from trade if exports only vehicle parts

12. Compared to the relative price in Portugal before trade, the free trade relative price of refined petroleum in terms of vehicle parts is
   a. Higher so refined petroleum sells for more vehicle parts than prior to international trade
   b. Lower so refined petroleum sells for less vehicle parts than prior to international trade
   c. The exact same as before trade
   d. Either a or c are possible
   e. Either b or c are possible
13-16 Under free trade with the rest of the world (ROW), the wage paid in the refined petroleum sector is the same as the wage in the iron ore sector in Brazil, while the wage in the refined petroleum sector exceeds the wage in the iron ore sector in the ROW.

13. The opportunity cost of refined petroleum in terms of iron ore is ________ in Brazil compared to the rest of the world.
   a. Higher
   b. Lower
   c. The same
   d. Higher or the same
   e. Lower or the same

14. The relative price of refined petroleum to iron ore in Brazil prior to trade is _______ the relative price of refined petroleum to iron ore under free trade.
   a. Higher than
   b. Lower than
   c. The same as
   d. Higher than or the same as
   e. Lower than or the same as

15. Brazil has comparative advantage in
   a. Only refined petroleum
   b. Only iron ore
   c. Both refined petroleum and iron ore for sure
   d. Refined petroleum for sure and possibly iron ore
   e. Iron ore for sure and possibly refined petroleum

16. Does Brazil gain from trade?
   a. Yes, Brazil is definitely better off with trade than without
   b. No, Brazil is indifferent between trading and not trading
   c. No, Brazil is definitely worse off with trade than without
   d. Maybe, as Brazil would gain from trade if exports only refined petroleum
   e. Maybe, as Brazil would gain from trade if exports only iron ore
PROBLEMS (Ricardian Model)
In the United States (US), producing one pound of cheese requires nine hours of labor, while producing one gallon of wine requires two hours of labor. In the rest of the world (ROW), producing one pound of cheese requires five hours of labor, while producing one gallon of wine requires one hour of labor. The United States has 3600 hours of labor and the ROW has 1900 hours of labor. World relative demand for cheese to wine is

$$RD = \frac{D_C}{D_W} = \frac{P_W}{P_C}.$$ 

17. The US production possibilities frontier (PPF) is
   a. $5Q_c + Q_w = 1900$
   b. $9Q_c + 2Q_w = 3600$
   c. $5Q_c + 2Q_w = 1900$
   d. $9Q_c + Q_w = 3600$
   e. None of the above

18. The US maximum production of cheese and of wine is
   a. 380 pounds of cheese, 1800 gallons of wine
   b. 380 pounds of cheese, 1900 gallons of wine
   c. 400 pounds of cheese, 1800 gallons of wine
   d. 400 pounds of cheese, 1900 gallons of wine
   e. None of the above

19. The US opportunity cost of cheese in terms of wine is
   a. 9
   b. 5
   c. $9/2 = 4.5$
   d. 2
   e. None of the above

20. To produce one additional pound of cheese, the United States must stop producing ____ gallons of wine.
   a. 9
   b. 5
   c. $9/2 = 4.5$
   d. 2
   e. None of the above
21. The US PPF is a straight line with wine endpoint ___ and slope ___ (with cheese on the horizontal axis).
   a. 1800, -9/2
   b. 1800, -5
   c. 1900, -9/2
   d. 1900, -5
   e. None of the above

22. When drawn with cheese on the horizontal axis, the absolute value of the slope of a country’s PPF indicates the
   a. Opportunity cost of wine in terms of cheese
   b. Opportunity cost of cheese in terms of wine
   c. How many hours of labor are required to produce a pound of cheese
   d. How many hours of labor are required to produce a gallon of wine
   e. None of the above

23. The ROW production possibilities frontier is
   a. \(5Q^*_c + Q^*_w = 1900\)
   b. \(9Q^*_c + 2Q^*_w = 3600\)
   c. \(5Q^*_c + 2Q^*_w = 1900\)
   d. \(9Q^*_c + Q^*_w = 3600\)
   e. None of the above

24. The ROW maximum production of cheese and of wine is
   a. 380 pounds of cheese, 1800 gallons of wine
   b. 380 pounds of cheese, 1900 gallons of wine
   c. 400 pounds of cheese, 1800 gallons of wine
   d. 400 pounds of cheese, 1900 gallons of wine
   e. None of the above

25. The ROW opportunity cost of cheese in terms of wine is
   a. 9
   b. 5
   c. 9/2
   d. 2
   e. None of the above
26. The ROW PPF is a straight line with wine endpoint ___ and slope ___ (with cheese on the horizontal axis).
   a. 1800, -9/2
   b. 1800, -5
   c. 1900, -9/2
   d. 1900, -5
   e. None of the above

27. The US PPF is ____ than the ROW PPF because the opportunity cost of cheese in terms of wine is _____ in the United States.
   a. Flatter, lower
   b. Flatter, higher
   c. Steeper, lower
   d. Steeper, higher
   e. None of the above

28. The United States has comparative advantage in ______ and the ROW has comparative advantage in ______.
   a. Wine, cheese
   b. Cheese, wine
   c. Wine & cheese, nothing
   d. Nothing, wine & cheese
   e. None of the above

29. In autarky (prior to trade), the relative price of cheese in terms of wine in the United States is ___ and in the ROW is ____.
   a. 2/9, 1/5
   b. 1/5, 2/9
   c. 5, 9/2
   d. 9/2, 5
   e. None of the above

30. What is the world relative supply of cheese to wine if each country produces only its comparative advantage good?
   a. 5
   b. 9/2 = 4.5
   c. 2/9
   d. 1/5
   e. None of the above
31. World relative supply has a first step at \( P_c/P_w \) equals
   a. 9
   b. 5
   c. \( 9/2 = 4.5 \)
   d. 2
   e. None of the above

32. World relative supply has a second step at \( P_c/P_w \) equals
   a. 9
   b. 5
   c. \( 9/2 = 4.5 \)
   d. 2
   e. None of the above

33. The jump in world relative supply occurs along the horizontal axis at
   a. 5
   b. \( 9/2 = 4.5 \)
   c. \( 2/9 \)
   d. \( 1/5 \)
   e. None of the above

34. World relative demand has points such as \((RD, \ P_c/P_w)\):
   a. \((9/2, \ 9/2)\), and \((5, \ 5)\)
   b. \((2/9, \ 9/2)\), and \((1/5, \ 1/5)\)
   c. \((2/9, \ 2/9)\), and \((1/5, \ 1/5)\)
   d. \((2/9, \ 9/2)\), and \((1/5, \ 5)\)
   e. None of the above

35. The relative price of cheese in terms of wine under free trade is
   a. 9
   b. 5
   c. \( 9/2 = 4.5 \)
   d. 2
   e. None of the above
36. Its interpretation is how many gallons of wine is needed to
   a. Produce a pound of cheese
   b. Buy a pound of cheese in autarky in the United States
   c. Buy a pound of cheese in autarky in the ROW
   d. Buy a pound of cheese under free trade
   e. None of the above

37. Under free trade, the United States produces
   a. 400 pounds of cheese, 0 gallons of wine
   b. 0 pounds of cheese, 1800 gallons of wine
   c. 400 pounds of cheese, 1800 gallons of wine
   d. 380 pounds of cheese, 1900 gallons of wine
   e. None of the above

38. Under free trade, the ROW produces
   a. 380 pounds of cheese, 0 gallons of wine
   b. 0 pounds of cheese, 1900 gallons of wine
   c. 380 pounds of cheese, 1900 gallons of wine
   d. 400 pounds of cheese, 1800 gallons of wine
   e. None of the above

39. The United States imports _____ and exports _____
   a. Wine, cheese
   b. Cheese, wine
   c. Wine & cheese, nothing
   d. Nothing, wine & cheese
   e. None of the above

40. The ROW imports _____ and exports _____
   a. Wine, cheese
   b. Cheese, wine
   c. Wine & cheese, nothing
   d. Nothing, wine & cheese
   e. None of the above
41. The US trade possibilities frontier (TPF) is
   a. $9D_c + 2D_w = 1900$
   b. $5D_c + D_w = 1900$
   c. $2D_c + 9D_w = 1900$
   d. $D_c + 5D_w = 1900$
   e. None of the above

42. The US maximum consumption of cheese and of wine under free trade is
   a. 380 pounds of cheese, 1800 gallons of wine
   b. 380 pounds of cheese, 1900 gallons of wine
   c. 400 pounds of cheese, 1800 gallons of wine
   d. 400 pounds of cheese, 1900 gallons of wine
   e. None of the above

43. With cheese on the horizontal axis, the absolute value of the slope of the US TPF indicates the
   a. US opportunity cost of cheese in terms of wine
   b. US opportunity cost of wine in terms of cheese
   c. ROW opportunity cost of cheese in terms of wine
   d. ROW opportunity cost of wine in terms of cheese
   e. None of the above

44. The US TPF is a straight line with wine endpoint ___ and slope ___ (with cheese on the horizontal axis).
   a. 1900, -5
   b. 1900, -9/2
   c. 1900, -2/9
   d. 1900, -1/5
   e. None of the above

45. The ROW trade possibilities frontier is
   a. $9D_{c}^* + 2D_{w}^* = 1900$
   b. $5D_{c}^* + D_{w}^* = 1900$
   c. $2D_{c}^* + 9D_{w}^* = 1900$
   d. $D_{c}^* + 5D_{w}^* = 1900$
   e. None of the above
46. The ROW maximum consumption of cheese and of wine under free trade is;
   a. 380 pounds of cheese, 1800 gallons of wine
   b. 380 pounds of cheese, 1900 gallons of wine
   c. 400 pounds of cheese, 1800 gallons of wine
   d. 400 pounds of cheese, 1900 gallons of wine
   e. None of the above

47. The ROW TPF is a straight line with wine endpoint ___ and slope ___ (with cheese on the horizontal axis).
   a. 1900, -5
   b. 1900, -9/2
   c. 1900, -2/9
   d. 1900, -1/5
   e. None of the above

48. The US TPF is ____ than the ROW TPF.
   a. Always flatter
   b. Always steeper
   c. Initially steeper then flatter
   d. Initially flatter then steeper
   e. None of the above

49. Who gains from trade?
   a. Only the United States
   b. Only the ROW
   c. Neither the United States nor the ROW
   d. Both the United States and the ROW
   e. None of the above

50. The source of any gains from trade is that the
   a. United States has an absolute advantage in producing cheese.
   b. ROW has an absolute advantage in producing wine.
   c. United States has an absolute advantage in producing both goods.
   d. ROW has an absolute advantage in producing both goods.
   e. None of the above
1d In 2013, the United States traded $585 billion with Canada, $552 billion with China, and $480 billion with Mexico.

2e The National Export Initiative failed in its aim to double U.S. exports from $1,583 billion in 2009 to over $3,000 billion by 2014. Slow growth in U.S. exports could be blamed on: All of the above.

3c Compared to the United States, Texas exports a larger share of its output and employs higher skilled workers in export-related jobs.

4d Exports from Texas to Canada were around $24 billion in 2012.

5e U.S. bilateral trade with Canada was around $568 billion in 2012. U.S. bilateral trade with Italy was around $56 billion in 2012.

6e The size of an economy is directly related to its volume of imports and exports because larger economies: a) and d).

7b Europe as a whole trades as much with the United States as does Canada.

8a Much more trade occurs between pairs of Canadian provinces than between Canadian provinces and U.S. states, holding distance constant.

9a Portugal produces only refined petroleum.

10a Portugal exports only refined petroleum.

11a Yes, Portugal is definitely better off with trade than without.

12a Compared to the relative price in Portugal before trade, the free trade relative price of refined petroleum in terms of vehicle parts is higher so refined petroleum sells for more vehicle parts than prior to international trade.

13a The opportunity cost of refined petroleum in terms of iron ore is higher in Brazil compared to the rest of the world.

14c The relative price of refined petroleum to iron ore in Brazil prior to trade is the same as the relative price of refined petroleum to iron ore under free trade.

15b Brazil has comparative advantage in only iron ore.

16b No, Brazil is indifferent between trading and not trading.
PROBLEMS (Ricardian Model)
In the United States (US), producing one pound of cheese requires nine hours of labor, while producing one gallon of wine requires two hours of labor. In the rest of the world (ROW), producing one pound of cheese requires five hours of labor, while producing one gallon of wine requires one hour of labor. The United States has 3600 hours of labor and the ROW has 1900 hours of labor. World relative demand for cheese to wine is

$$RD = \frac{D_c}{D_w} = \frac{P_w}{P_c}.$$ 

17b The US production possibilities frontier (PPF) is $9Q_c + 2Q_w = 3600$.
18c The US maximum production of cheese and of wine is 400 pounds of cheese, 1800 gallons of wine.
19c The US opportunity cost of cheese in terms of wine is $9/2 = 4.5$.
20c To produce one additional pound of cheese, the United States must stop producing $9/2 = 4.5$ gallons of wine.
21a The US PPF is a straight line with wine endpoint 1800 and slope $-9/2$ (with cheese on the horizontal axis).
22b When drawn with cheese on the horizontal axis, the absolute value of the slope of a country’s PPF indicates the opportunity cost of cheese in terms of wine.

23a The ROW production possibilities frontier is $5Q^*_c + Q^*_w = 1900$.
24b The ROW maximum production of cheese and of wine is 380 pounds of cheese, 1900 gallons of wine.
25b The ROW opportunity cost of cheese in terms of wine is 5.
26d The ROW PPF is a straight line with wine endpoint 1900 and slope -5 (with cheese on the horizontal axis).
27a The US PPF is flatter than the ROW PPF because the opportunity cost of cheese in terms of wine is lower in the United States.
28b The United States has comparative advantage in cheese and the ROW has comparative advantage in wine.

29d In autarky (prior to trade), the relative price of cheese in terms of wine in the United States is $9/2$ and in the ROW is 5.
30e What is the world relative supply of cheese to wine if each country produces only its comparative advantage good? None of the above
31c World relative supply has a first step at $P_c/P_w$ equals $9/2 = 4.5$.
32b World relative supply has a second step at $P_c/P_w$ equals 5.
33e The jump in world relative supply occurs along the horizontal axis at none of the above.
34d World relative demand has points such as $(RD, P_c/P_w)$: $(2/9, 9/2)$, and $(1/5, 5)$.
35e The relative price of cheese in terms of wine under free trade is none of the above ($19/4 = 4.75$).
36d Its interpretation is how many gallons of wine is needed to buy a pound of cheese under free trade.

37a Under free trade, the United States produces 400 pounds of cheese, 0 gallons of wine.
38b Under free trade, the ROW produces 0 pounds of cheese, 1900 gallons of wine.
39a The United States imports wine and exports cheese.
40b The ROW imports cheese and exports wine.

41e The US trade possibilities frontier is $(19/4)D_c + D_w = 1900$ (none of the above).
42d The US maximum consumption of cheese and of wine under free trade is 400 pounds of cheese, 1900 gallons of wine.
43e With cheese on the horizontal axis, the absolute value of the slope of the US TPF indicates none of the above.
44e The US TPF is a straight line with wine endpoint 1900 and slope $-19/4$ (with cheese on the horizontal axis). None of the above

45e The ROW trade possibilities frontier is $(19/4)D_c^* + D_w^* = 1900$ (none of the above).
46d The ROW maximum consumption of cheese and of wine under free trade is; 400 pounds of cheese, 1900 gallons of wine.
47e The ROW TPF is a straight line with wine endpoint 1900 and slope $-19/4$ (with cheese on the horizontal axis). None of the above
48e The US TPF is the same slope as the ROW TPF. None of the above.
49d Who gains from trade? Both the United States and the ROW
50e The source of any gains from trade is that the free trade relative price differs from both opportunity costs. None of the above