PROBLEMS (Ricardian Model)
In the United States (US), producing one pound of cheese requires two hours of labor, while producing one gallon of wine requires one hour of labor. In the rest of the world (ROW), producing one pound of cheese requires six hours of labor, while producing one gallon of wine requires one hour of labor. The United States has 300 hours of labor and the ROW has 450 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. \(2Q_c + Q_w = 300\)
   b. \(Q_c + 2Q_w = 300\)
   c. \(6Q_c + Q_w = 450\)
   d. \(Q_c + 6Q_w = 450\)
   e. None of the above

18. The US maximum production of cheese and of wine is
   a. 300 pounds of cheese, 150 gallons of wine
   b. 150 pounds of cheese, 300 gallons of wine
   c. 450 pounds of cheese, 75 gallons of wine
   d. 75 pounds of cheese, 450 gallons of wine
   e. None of the above

19. The US opportunity cost of cheese in terms of wine is
   a. \(1/6\)
   b. 6
   c. 2
   d. \(1/2\)
   e. None of the above

20. To produce one additional pound of cheese, the United States must stop producing ___ gallons of wine.
   a. \(1/6\)
   b. 6
   c. 2
   d. \(1/2\)
   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. 300, -1/2
   b. 300, -2
   c. 450, -1/6
   d. 450, -6
   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. \(2Q^*_c + Q^*_w = 300\)
   b. \(Q^*_c + 2Q^*_w = 300\)
   c. \(6Q^*_c + Q^*_w = 450\)
   d. \(Q^*_c + 6Q^*_w = 450\)
   e. None of the above

24. The ROW maximum production of cheese and of wine is
   a. 300 pounds of cheese, 150 gallons of wine
   b. 150 pounds of cheese, 300 gallons of wine
   c. 450 pounds of cheese, 75 gallons of wine
   d. 75 pounds of cheese, 450 gallons of wine
   e. None of the above

25. The ROW opportunity cost of cheese in terms of wine is
   a. 2
   b. 1/2
   c. 6
   d. 1/6
   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. 300, -1/2
   b. 300, -2
   c. 450, -1/6
   d. 450, -6
   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, 6
   b. 1/2, 1/6
   c. 2, 3
   d. 1/2, 1/3
   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. 2
   b. 1/2
   c. 6
   d. 1/6
   e. None of the above
31. World relative supply has a first step at $P_c/P_w$ equals
   a. $\frac{1}{6}$
   b. 6
   c. $\frac{1}{2}$
   d. 2
   e. None of the above

32. World relative supply has a second step at $P_c/P_w$ equals
   a. $\frac{1}{6}$
   b. 6
   c. $\frac{1}{2}$
   d. 2
   e. None of the above

33. The jump in world relative supply occurs along the horizontal axis at
   a. $\frac{1}{6}$
   b. 6
   c. $\frac{1}{2}$
   d. 2
   e. None of the above

34. World relative demand has points such as $(P_c/P_w, RD)$:
   a. $(2, 2), (3, 3)$ and $(6, 6)$
   b. $(1/2, 1/2), (1/3, 1/3)$ and $(1/6, 1/6)$
   c. $(2, 1/2), (3, 1/3)$ and $(6, 1/6)$
   d. $(2, 1/4), (3, 1/6)$ and $(6, 1/12)$
   e. None of the above

35. The relative price of cheese in terms of wine under free trade is
   a. 2
   b. $\frac{1}{2}$
   c. 6
   d. $\frac{1}{6}$
   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. 300 pounds of cheese, 150 gallons of wine  
   b. 75 pounds of cheese, 0 gallons of wine  
   c. 300 pounds of cheese, 0 gallons of wine  
   d. 0 pounds of cheese, 150 gallons of wine  
   e. None of the above  

38. Under free trade, the ROW produces  
   a. 450 pounds of cheese, 75 gallons of wine  
   b. 300 pounds of cheese, 0 gallons of wine  
   c. 0 pounds of cheese, 75 gallons of wine  
   d. 75 pounds of cheese, 0 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. $2D_c + D_w = 300$
   b. $D_c + 3D_w = 450$
   c. $3D_c + D_w = 450$
   d. $D_c + 2D_w = 300$
   e. None of the above

42. The US maximum consumption of cheese and of wine under free trade is
   a. 450 pounds of cheese, 150 gallons of wine
   b. 150 pounds of cheese, 450 gallons of wine
   c. 450 pounds of cheese, 75 gallons of wine
   d. 75 pounds of cheese, 450 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. 300, -1/2
   b. 300, -2
   c. 450, -1/3
   d. 450, -3
   e. None of the above

45. The ROW trade possibilities frontier is
   a. $2D^*_c + D^*_w = 300$
   b. $D^*_c + 3D^*_w = 450$
   c. $3D^*_c + D^*_w = 450$
   d. $D^*_c + 2D^*_w = 300$
   e. None of the above
46. The ROW maximum consumption of cheese and of wine under free trade.
   a. 450 pounds of cheese, 150 gallons of wine
   b. 150 pounds of cheese, 450 gallons of wine
   c. 450 pounds of cheese, 75 gallons of wine
   d. 75 pounds of cheese, 450 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. 450, -1/6
   b. 450, -6
   c. 450, -1/3
   d. 450, -3
   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