

Student name: _____

TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.

1) An increase in demand for a good will lead to a larger increase in price if the supply is relatively elastic.

- ☐ true
- ☐ false

2) A decrease in income will lead to an increase in the demand for an inferior good.

- ☐ true
- ☐ false

3) An increase in individual income will lead to an inward shift of the demand curve for a typical product.

- ☐ true
- ☐ false

4) If a 1 percent increase in an individual's income leads to a 0.5 percent increase in the demand for a good, the good is considered to be a normal good.

- ☐ true
- ☐ false

5) Consumer surplus is the net economic benefit to consumers who are able to buy a good at a price lower than the highest price they are willing to pay.

- ☐ true
- ☐ false

6) The net economic gains from free trade are usually negative.

- ☐ true
- ☐ false

7) The price elasticity of demand measures the responsiveness of consumers to changes in the price of a product.

- ☐ true
- ☐ false

8) The net national gain from trade can be measured using the changes in consumer surplus and producer surplus that result from trade.

- ☐ true
- ☐ false

9) If markets are perfectly competitive, the free-trade price of a good in an importing country is expected to be lower than the pre-trade price of the good in that country.

- ☐ true
- ☐ false

10) When free trade begins, producers in the importing nation gain while producers in the exporting nation are worse off.

- ☐ true
- ☐ false

11) Free trade is a zero-sum activity because a country always gains at the expense of its trading partner.

- ☐ true
- ☐ false

12) The gains from trade are divided in proportion to the price changes that trade brings to the trading countries.

- ☐ true
- ☐ false

13) If the world price is higher than the no-trade domestic price, then domestic producers gain, and domestic consumers lose as a result of free trade.

- ☐ true
- ☐ false

MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.

14) If an individual consumes more of Good X when his/her income doubles, we can infer that

- A) the individual is highly sensitive to changes in the price of Good X.
- B) Good X is a normal good.
- C) Good X is an inferior good.
- D) the demand for Good X is perfectly inelastic.

15) Which of the following factors can lead to an increase in demand for coffee at Starbucks?

- A) An increase in household income
- B) An increase in the price of sugar
- C) An increase in the price of coffee beans
- D) A 10 percent decline in local population

16) If the price of a normal good is measured along the vertical axis and its quantity along the horizontal axis, an increase in the price of the good will lead to

- A) a downward movement along the demand curve.
- B) an upward movement along the demand curve.
- C) a rightward shift of the demand curve.
- D) a leftward shift of the demand curve.

17) Everything else remaining unchanged, when the price of a normal good increases, consumers probably

- A) purchase more of the good.
- B) purchase less of the good.
- C) purchase the same amount of the good.
- D) do not purchase any amount of the good.

18) Suppose Good X is a substitute for Good Y. Everything else remaining unchanged, an increase in the price of Good Y will lead to

- A) an increase in demand for Good Y.
- B) a decrease in demand for Good X.
- C) an increase in demand for Good X.
- D) a decrease in the price of Good X.

19) Which of the following events would lead to a decrease in demand for air travel?

- A) A decrease in the number of people who are afraid to fly
- B) A decrease in oil prices
- C) A decrease in rail fares
- D) An increase in income levels

20) Harry used to work in a laundrette and earned \$30 a day. After work, he normally had a chicken burger worth \$5 at McDonalds. After his pay was lowered to \$20 he would purchase a vegetable burger worth \$3 instead of the \$5 chicken burger. In this scenario, the vegetable burger is an example of a(n)

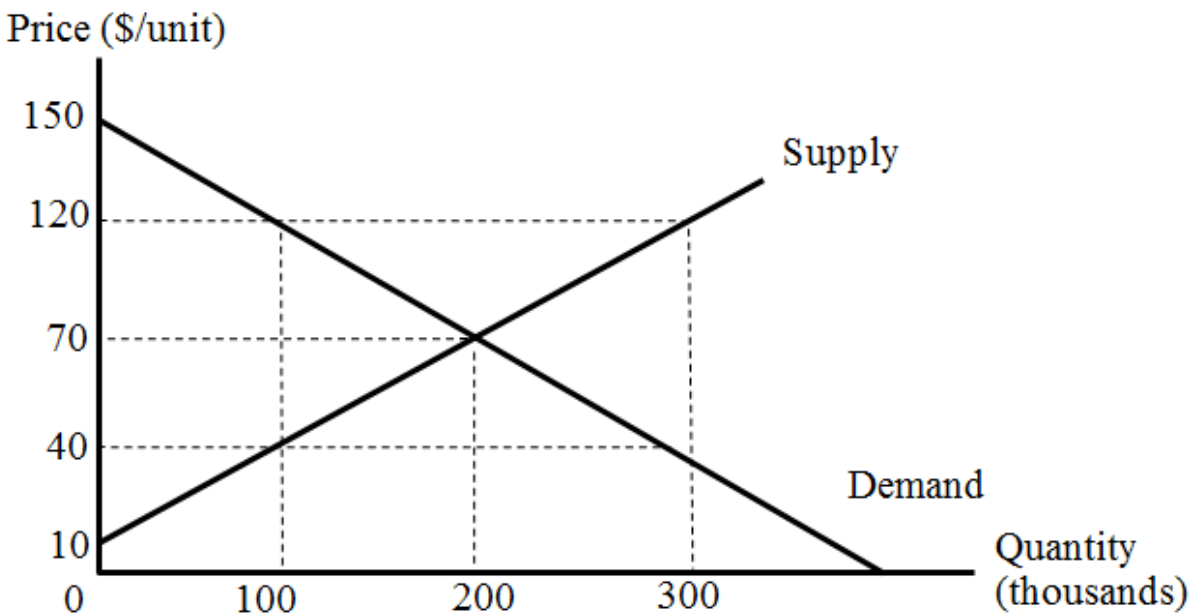
- A) inferior good.
- B) normal good.
- C) complement good.
- D) luxury good.

- 21) The value of price elasticity of demand is negative because it indicates
- A) the inverse relationship between the price offered and the quantity demanded for the good.
 - B) that the value of the consumer surplus is negative for this good.
 - C) that the changes in quantity demanded are much less compared to the changes in price for this good.
 - D) the direct relationship between the price and consumer surplus from the good.
- 22) Which of the following will cause a rightward shift of the market supply curve?
- A) An increase in the product price
 - B) A decrease in input prices
 - C) Change in consumers' tastes
 - D) An increase in national income
- 23) Which of the following is a "unit-free" measure?
- A) Consumer surplus when the demand curve is horizontal
 - B) Producer surplus when the supply curve is vertical
 - C) Market supply
 - D) Price elasticity of demand
- 24) If a 1 percent increase in the price of DVD players leads to a 3 percent reduction in the number of DVD players sold, we can conclude that
- A) the supply of DVD players is perfectly inelastic.
 - B) DVD players are inferior goods.
 - C) the demand for DVD players is relatively elastic.
 - D) the demand for DVD players is relatively inelastic.

25) Which of the following is true of consumer surplus?

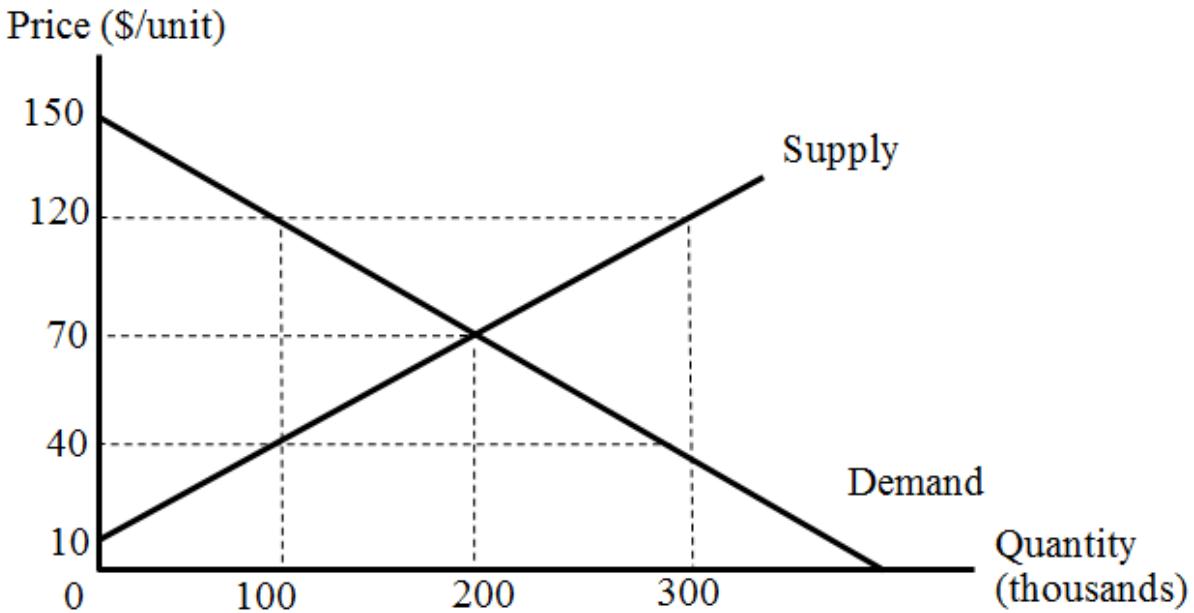
- A) It is graphically represented as the area under the equilibrium price and above the supply curve of a good.
- B) It is the net gain in economic well-being associated with producing and selling the equilibrium quantity of a good.
- C) It is used to measure the impact of a change in price on the economic well-being of the producers.
- D) It is the difference between the value that one places on a good and the price paid for the good.

26) Refer to Figure 2.1 below. At a price of \$70, the consumer surplus equals



- A) \$6,000,000.
- B) \$8,000,000.
- C) \$5,000,000.
- D) \$10,000,000.

27) Refer to Figure 2.1 below. At a price of \$70, the producer surplus equals



- A) \$6,000,000.
- B) \$8,000,000.
- C) \$15,000,000.
- D) \$30,000,000.

28) To maximize profit a perfectly competitive firm supplies a good up to the point at which

- A) the marginal revenue is higher than the marginal cost.
- B) the marginal cost of producing the good is zero.
- C) the price of the good equals marginal cost.
- D) the average revenue equals average cost.

29) Which of the following groups are most likely to benefit when a country engages in free trade?

- A) All the domestic producers of the country
- B) The manufacturers of exportable goods
- C) The producers in the import-competing industries
- D) The workers employed in the import-competing industries

30) Which of the following is an example of arbitrage?

- A) A firm sells a box of cereal at \$10 when the average cost of producing it is \$6.
- B) Thomas buys a new stock issued by a firm on the stock exchange.
- C) A local salon charges 5 percent more for all its services than a competing salon in the same locality.
- D) Romi buys a DVD from Walmart at \$10 and sells it on eBay for \$20.

31) An increase in imports of clothing into the United States from India will benefit the _____ and hurt the _____

- A) U.S. clothing producers; Indian clothing producers.
- B) Indian consumers; Indian clothing producers.
- C) U.S. consumers; Indian clothing producers.
- D) U.S. consumers; U.S. clothing producers.

32) Suppose Country A and Country B are the only two countries in the world. Country A imports Good X from Country B and exports Good Y. In the absence of any transportation cost, at the world price of Good X

- A) Country B's export supply curve is perfectly inelastic.
- B) both Country A's import demand curve and Country B's export supply curve are positively sloped.
- C) Country A's import demand curve will be perfectly inelastic.
- D) Country A's import demand curve will intersect Country B's export supply curve.

33) Suppose the domestic supply ($Q^S_{U.S}$) and demand ($Q^D_{U.S}$) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

In the absence of international trade in skateboards, what will be the equilibrium price of skateboards in the United States?

- A) \$66
- B) \$90
- C) \$45
- D) \$150

34) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

In the absence of international trade in skateboards how many skateboards will be sold in the United States?

- A) 138
- B) 258
- C) 210
- D) 930

35) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

If the United States can import skateboards from the rest of the world at a per unit price of \$75, how many skateboards will be produced in the United States?

- A) 165
- B) 240
- C) 285
- D) 215

36) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

If the United States can import skateboards from the rest of the world at a per unit price of \$75, what will be the total demand for skateboards in the United States?

- A) 165
- B) 240
- C) 285
- D) 245

37) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

If the United States engages in free trade and the international price of skateboards is \$75, it would import _____ skateboards from the rest of the world.

- A) 65
- B) 85
- C) 75
- D) 95

38) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

In the absence of trade with the rest of the world, the consumer surplus in the U.S. skateboard market equals _____ and the producer surplus equals _____

- A) \$7,050; \$11,525.
- B) \$31,500; \$9,450.
- C) \$20,474; \$7,350.
- D) \$11,025; \$7,350.

39) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

Calculate the change in consumer surplus when the United States shifts from no trade to free trade and imports skateboards from the rest of the world at a per unit price of \$75.

A) +\$2,850

B) -\$2,850

C) -\$6,300

D) +\$3,375

40) Suppose the domestic supply (Q^S) and demand (Q^D) for skateboards in the United States is represented by the following set of equations:

$$Q^S = -60 + 3P$$

$$Q^D = 390 - 2P$$

Calculate the change in producer surplus when the United States engages in free trade and imports skateboards from the rest of the world at a per unit price of \$75.

A) +\$2,812.50.

B) -\$2,812.50.

C) +\$3,375.

D) -\$3,375.

41) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

In the absence of international trade in MP3 players, what will be the price of MP3 players in the United States?

A) \$60

B) \$65

C) \$90

D) \$70

42) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

In the absence of international trade in MP3 players, how many MP3 players will be sold in the United States?

- A) 825
- B) 575
- C) 608
- D) 925

43) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

If the United States can import MP3 players from the rest of the world at a per unit price of \$50, how many MP3 players will be produced in the United States?

- A) 625
- B) 475
- C) 925
- D) 525

44) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

If the United States can import MP3 players from the rest of the world at a per unit price of \$50, what will be the total demand for MP3 players in the United States?

- A) 625
- B) 475
- C) 925
- D) 550

45) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

If the United States engages in free trade and the international price of MP3 players is \$50, it would import _____ MP3 players from the rest of the world.

- A) 150
- B) 250
- C) 475
- D) 225

46) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

In the absence of trade with the rest of the world, the consumer surplus in the United States MP3 player market is

- A) \$22,562.50.
- B) \$30,062.50.
- C) \$33,062.50.
- D) \$19,500.00.

47) Suppose the domestic supply (Q^S) and demand (Q^D) for MP3 players in the United States is represented by the following set of equations:

$$Q^S = -25 + 10P$$

$$Q^D = 875 - 5P$$

The consumer surplus will _____ by _____ when the United States engages in international trade and the international price for MP3 players settles at \$50.

- A) increase; \$2,625
- B) increase; \$6,000
- C) decrease; \$7,150
- D) decrease; \$13,500

48) Suppose the domestic supply ($Q^S_{U.S.}$) and demand ($Q^D_{U.S.}$) for bicycles in the United States is represented by the following set of equations:

$$Q^S_{U.S.} = 2P$$

$$Q^D_{U.S.} = 200 - 2P.$$

Demand (Q^D) and supply (Q^S) in the rest of the world is represented by the equations:

$$Q^S = P$$

$$Q^D = 160 - P.$$

Quantities are measured in thousands and price, in U.S. dollars.

In the absence of international trade, _____ thousand bicycles will be sold in the United States at a per unit price of

- A) 50; \$50.
- B) 100; \$100.
- C) 150; \$50.
- D) 100; \$50.

49) Suppose the domestic supply ($Q^S_{U.S.}$) and demand ($Q^D_{U.S.}$) for bicycles in the United States is represented by the following set of equations:

$$Q^S_{U.S.} = 2P$$

$$Q^D_{U.S.} = 200 - 2P.$$

Demand (Q^D) and supply (Q^S) in the rest of the world is represented by the equations:

$$Q^S = P$$

$$Q^D = 160 - P.$$

Quantities are measured in thousands and the price, in U.S. dollars.

In the absence of international trade, _____ thousand bicycles will be sold in the rest of the world at a per unit price of

- A) 80; \$80.
- B) 100; \$100.
- C) 50; \$100.
- D) 100; \$50.

50) Suppose the domestic supply ($Q^S_{U.S.}$) and demand ($Q^D_{U.S.}$) for bicycles in the United States is represented by the following set of equations:

$$Q^S_{U.S.} = 2P$$

$$Q^D_{U.S.} = 200 - 2P.$$

Demand (Q^D) and supply (Q^S) in the rest of the world is represented by the equations:

$$Q^S = P$$

$$Q^D = 160 - P.$$

Quantities are measured in thousands and price, in U.S. dollars.

After the opening of free trade with the rest of the world, if the world price of bicycles settles at \$60, the United States will

- A) export 40,000 bicycles.
- B) export 60,000 bicycles.
- C) import 60,000 bicycles.
- D) import 40,000 bicycles.

51) Suppose the domestic supply ($Q^S_{U.S.}$) and demand ($Q^D_{U.S.}$) for bicycles in the United States is represented by the following set of equations:

$$Q^S_{U.S.} = 2P$$

$$Q^D_{U.S.} = 200 - 2P.$$

Demand (Q^D) and supply (Q^S) in the rest of the world is represented by the equations:

$$Q^S = P$$

$$Q^D = 160 - P.$$

Quantities are measured in thousands and price, in U.S. dollars.

After the opening of free trade with the United States, if the world price of the bicycles settles at \$60, the rest of the world will

- A) export 40,000 bicycles.
- B) export 60,000 bicycles.
- C) import 60,000 bicycles.
- D) import 40,000 bicycles.

52) Suppose the domestic supply ($Q^S_{U.S.}$) and demand ($Q^D_{U.S.}$) for bicycles in the United States is represented by the following set of equations:

$$Q^S_{U.S.} = 2P$$

$$Q^D_{U.S.} = 200 - 2P.$$

Demand (Q^D) and supply (Q^S) in the rest of the world is represented by the equations:

$$Q^S = P$$

$$Q^D = 160 - P.$$

Quantities are measured in thousands and price, in U.S. dollars.

After the opening of free trade between the United States and the rest of the world

- A) neither the United States nor the rest of the world gain from trade.
- B) both countries gain from trade, but the United States gains more than the rest of the world.
- C) both countries gain from trade, but the rest of the world gains more than the United States.
- D) the net change in total surplus in the United States is zero, but the rest of the world gains.

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

53) How does a move from no free trade to international free trade alter production and consumption in both the importing and exporting country in a two-country world?

54) What is the measure of responsiveness of quantity demanded of a product to a change in its price? Why is it a negative number for a typical good? With the help of suitable diagrams, explain the difference between elastic and inelastic demand.

55) In a two-country world, the opening of free trade does not make everyone in the two countries better off. If we focus on a single product, which group in each country is better off? Which is worse off? What assumption(s) must be made to make the claim that both countries do in fact benefit from the free trade?

56) Assume there are only two countries in the world, Pacifica and Atlantica. Both countries produce and consume surfboards. The pre-trade price of surfboards in Atlantica is lower than the pre-trade price of surfboards in Pacifica. Draw a three-graph diagram to depict the Pacifica, Atlantica, and international markets for surfboards illustrating the pre-trade price difference. Now assume that free trade opens up between Pacifica and Atlantica. Depict a plausible world price in the graphs. Using one of the three graphs below, show what happens to overall economic welfare in the two countries. Be sure to label and refer to the graphs in your answer.

57) Consider a product with a perfectly competitive market. Carefully explain why nations gain from engaging in international trade in this product. Do nations gain equally from trade? If not, what determines which country gains more? (In your answer you can assume a two-country world.)

58) Why would umbrellas be produced in an arid country whose residents have no demand for such clothing product?

59) Country A produces shoes at a lower cost than Country B. As a result, most of the shoes purchased in Country B are made in Country A. Explain how trading with Country A results in a net gain for Country B.

60) The difference in the prices of a good in two countries creates opportunities for arbitrage: traders buy the good at a low price in one country and sell it at a higher price in the other. When the difference in the prices vanishes, and the world price is established in both countries, there is no scope for trade anymore because no trader will be willing to buy the good in one country and sell it in another. Discuss the validity of this statement.

Answer Key

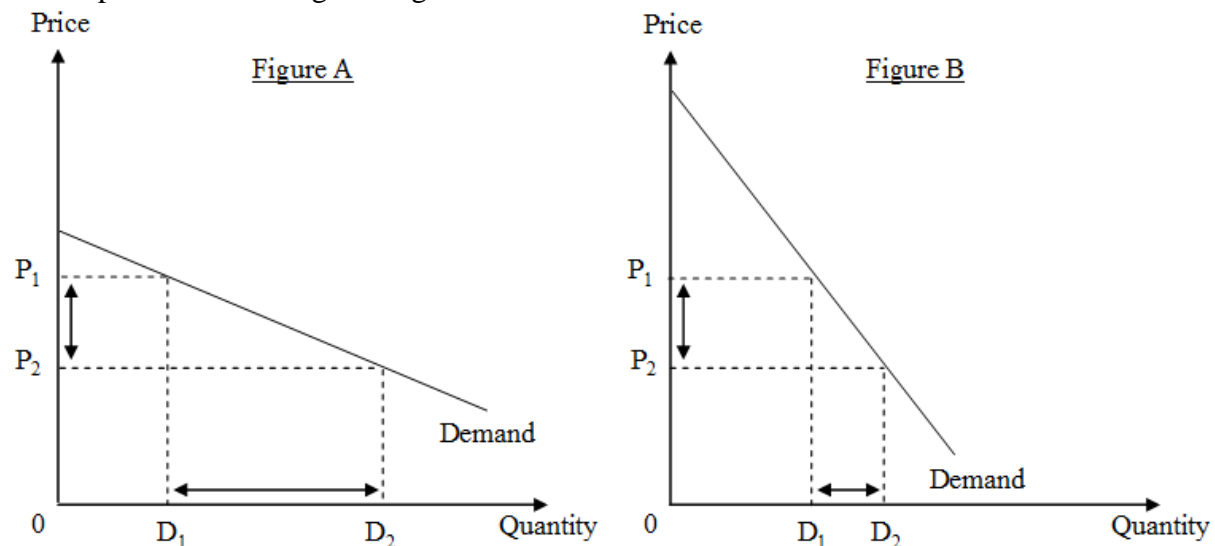
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- 1) FALSE
- 2) TRUE
- 3) FALSE
- 4) TRUE
- 5) TRUE
- 6) FALSE
- 7) TRUE
- 8) TRUE
- 9) TRUE
- 10) FALSE
- 11) FALSE
- 12) TRUE
- 13) TRUE
- 14) B
- 15) A
- 16) B
- 17) B
- 18) C
- 19) C
- 20) A
- 21) A
- 22) B
- 23) D
- 24) C
- 25) D
- 26) B

- 27) A
- 28) C
- 29) B
- 30) D
- 31) D
- 32) D
- 33) B
- 34) C
- 35) A
- 36) B
- 37) C
- 38) D
- 39) D
- 40) B
- 41) A
- 42) B
- 43) B
- 44) A
- 45) A
- 46) C
- 47) B
- 48) D
- 49) A
- 50) A
- 51) D
- 52) C

53) POSSIBLE RESPONSE: The move from no trade to a free-trade equilibrium changes the product price from its no-trade value to the free-trade equilibrium international price or world price. The price change in each country results in changes in quantities consumed and produced. In the country importing the product, trade raises the quantity consumed and lowers the quantity produced of that product. In the exporting country, trade raises the quantity produced and lowers the quantity consumed of the product.

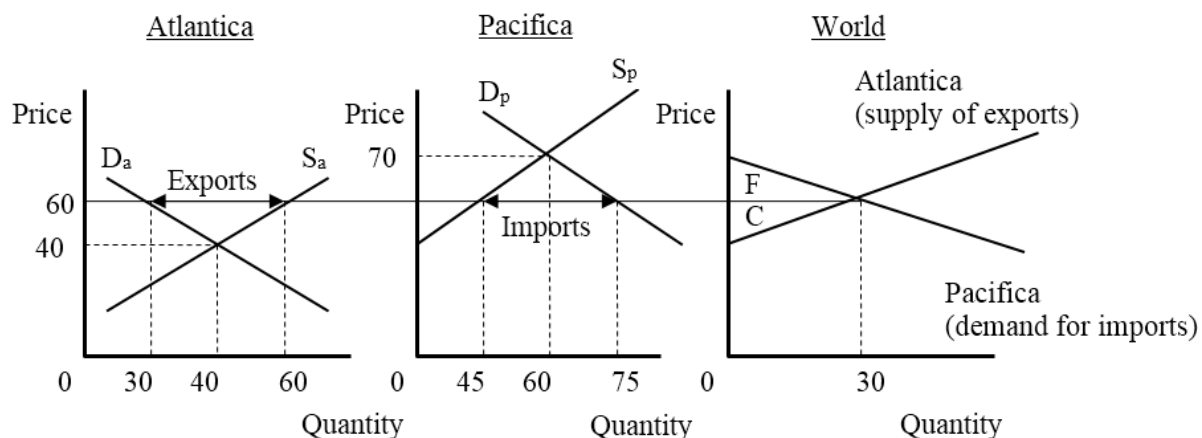
54) **POSSIBLE RESPONSE:** The price elasticity of demand is a measure of responsiveness of quantity demanded of a product to a change in its price. The price elasticity of demand measures the percentage change in quantity demanded of a product resulting from a 1 percent change in its price. It is a unit-free measure. Since an increase in price of a typical product results in a decrease in its quantity demanded and vice versa, the price elasticity of demand is a negative number. The difference between price-elastic and price-inelastic demand can be explained with the help of the following two figures.



The two figures show two demand curves, each with the same starting point of price P_1 and quantity D_1 . Now consider the same decrease in price, from P_1 to P_2 , for each figure. Let's say that this change in price is a 40 percent decrease. In Figure A, the quantity demanded would change to D_2 , which is a change of 200 percent. In Figure B, the change in quantity would be to D_2 , which is a change of 30 percent. For the same starting point (P_1 and D_1) and the same decrease in price to P_2 , the price elasticity is $-5 (= 200\%/(-40\%))$ for Figure A, and the price elasticity is $-0.75 (= 30\%/(-40\%))$ for Figure B. For this range around the same starting point, demand is price elastic (greater than one in absolute value) for the demand curve shown in Figure A, and demand is price inelastic (less than one in absolute value) for the demand curve shown in Figure B. For the same starting point, the flatter demand curve is more price elastic.

55) POSSIBLE RESPONSE: It is true that free trade does not benefit everyone within a country. The gainers in the importing country are the consumers. They enjoy lower prices, and possibly a wider variety of the product. The producers in the exporting country, who are expanding their production as they are receiving a higher price by accessing foreign demand through free trade, also gain. The losers are the consumers of the product in the exporting country and the import-competing producers. If we accept the one-dollar one-vote metric to measure the national well-being of a country, we find that there are net national gains from trade. The assumption is that we value each dollar of gains and losses of different groups equally. In each country the gainers are gaining more than the losers are losing.

56) POSSIBLE RESPONSE:



The above graph illustrates a possible international price. The graph to the left represents demand and supply in Atlantica, the graph in the middle, the market in Pacifica, and the graph to the right, the world market. D_a and S_a are the demand and supply curves for Atlantica respectively. D_p and S_p are the demand and supply curves for Pacifica respectively. The international price of 60 is between the no-trade prices of 40 and 70. The international price is such a price that the excess supply in Atlantica matches the excess demand in Pacifica. As a result, Atlantica exports 30 units to Pacifica at a price of 60. Both countries gain from international trade. Atlantica gains area C in the right graph, and Pacifica gains area F.

57) POSSIBLE RESPONSE: Assuming a two-country world, demand and supply differ in the two countries, so prices also differ if there is no international trade. With the opening of international trade, arbitrage opportunities arise: opportunities to make a profit by buying the good cheaper in one country and selling it in another. Due to this international trade the prices in the two countries equalize. The gain from trade in the importing country arises because consumers in this country gain more than producers lose as a result of the reduced price. The gain from trade in the exporting country exists because producers gain more than local consumers lose. In general, nations do not gain equally from trade. The country which experiences a larger change in its price stands to gain more. The country with the less elastic (steeper) trade curve (import demand curve or export supply curve) gains more. More precisely, the national gain from trade is proportional to the change in the price that occurs due to the shift from no trade to free trade.

58) POSSIBLE RESPONSE: For this arid country, any umbrella production must be exported, so its domestic supply curve is also its export supply curve. It will produce and export umbrellas if it has some local production whose marginal cost is lower than the no-trade price in the rest of the world.

59) POSSIBLE RESPONSE: As a result of the free trade between Country A and Country B, the price of shoes in Country B will be equal to the international price. So, the prices of shoes in Country B will fall (compared to the situation of no trade). Consumers will gain due to the lower price, and the increased purchases of shoes (consumers' total surplus is measured by the area below the demand curve for shoes and above the international price). Facing a lower price (the international price), the domestic producers of shoes in Country B will react by decreasing their production of shoes. Hence, there is a loss of surplus to producers associated with the opening of trade. In general, consumers gain more than producers lose, so trade results in a net gain for Country B.

60) POSSIBLE RESPONSE: This is not a valid statement. Consider Country A and Country B and assume that without trade the price of the good is P_A in Country A and P_B in Country B, where $P_A < P_B$. With the opening of free trade, the arbitrage possibilities will eliminate the difference in the prices in the two countries. So, the world price, P_w , will establish itself between the two local prices: $P_A < P_w < P_B$. Country A will be exporting the good to Country B. But, if the countries then stopped trading, the no-trade price difference would reemerge. It is the ongoing trade that keeps the price the same in the two countries.