

**Macroeconomics, 12e (Parkin)**

**Chapter 2 The Economic Problem**

**1 Production Possibilities and Opportunity Cost**

1) The production possibilities frontier is the boundary between

- A) those combinations of goods and services that can be produced and those that can be consumed.
- B) those resources that are limited and those that are unlimited.
- C) those combinations of goods and services that can be produced and those that cannot.
- D) those wants that are limited and those that are unlimited.

Answer: C

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

2) The production possibilities frontier is

- A) upward sloping and reflects unlimited choices.
- B) upward sloping and reflects tradeoffs in choices.
- C) downward sloping and reflects unlimited choices.
- D) downward sloping and reflects tradeoffs in choices.

Answer: D

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

3) The production possibilities frontier

- A) depicts the boundary between those combinations of goods and services that can be produced and those that cannot, given resources and the current state of technology.
- B) shows how many goods and services are consumed by each person in a country.
- C) is a model that assumes there is no scarcity and no opportunity cost.
- D) is a graph with price on the vertical axis and income on the horizontal axis.

Answer: A

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

4) The production possibilities frontier itself illustrates

- A) all goods that can be produced by an economy.
- B) the combination of goods and services that can be produced efficiently.
- C) all goods and services that are desired but cannot be produced due to scarce resources.
- D) all possible production of capital goods.

Answer: B

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

5) The production possibilities frontier is the boundary between those combination of goods and services that can be

- A) produced and those that can be consumed.
- B) consumed domestically and those that can be consumed by foreigners.
- C) produced and those that cannot be produced.
- D) consumed and those that cannot be produced.

Answer: C

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

6) The production possibilities frontier itself shows

- A) the maximum amount of resources available at any given time.
- B) combinations of goods and services that do not fully use available resources.
- C) the maximum rate of growth of output possible for an economy.
- D) the maximum levels of production that can be attained.

Answer: D

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

7) The production possibilities frontier represents

- A) the maximum amount of labor and capital available to society.
- B) combinations of goods and services among which consumers are indifferent.
- C) the maximum levels of production that can be attained.
- D) the maximum rate of growth of capital and labor in a country.

Answer: C

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

8) Which of the following is NOT true concerning a society's production possibilities frontier (*PPF*)?

- A) It reveals the maximum amount of any two goods that can be produced from a given quantity of resources.
- B) Tradeoffs occur when moving along a *PPF*.
- C) Production efficiency occurs when production is on the frontier itself.
- D) Consumers will receive equal benefits from the two goods illustrated in the *PPF*.

Answer: D

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

- 9) The production possibilities frontier separates \_\_\_\_\_.
- A) the goods and services that people want from those that they do not want
  - B) the types of goods that can be attained from those that can't be attained
  - C) the quantities of goods and services that can be produced from those that cannot be produced
  - D) the combinations of goods that people value and those that they don't

Answer: C

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

- 10) When producing at a production efficient point, \_\_\_\_\_.
- A) our choice of the goods can be either on or within the production possibilities frontier
  - B) we can satisfy our all wants
  - C) the opportunity cost of another good is zero
  - D) we face a tradeoff and incur an opportunity cost

Answer: D

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

- 11) Harry produces 2 balloon rides and 4 boat rides an hour. Harry could produce more balloon rides but to do so he must produce fewer boat rides. Harry is \_\_\_\_\_ his production possibilities frontier.

- A) producing inside
- B) producing on
- C) producing outside
- D) producing either inside or on

Answer: B

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

- 12) Production efficiency occurs when production \_\_\_\_\_.
- A) is at a point beyond the production possibilities frontier
  - B) is on the production possibilities frontier or inside it
  - C) is at any attainable point
  - D) is on the production possibilities frontier

Answer: D

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

- 13) A point outside a production possibilities frontier indicates
- A) that resources are not being used efficiently.
  - B) an output combination that society cannot attain given its current level of resources and technology.
  - C) that resources are being used very efficiently.
  - D) that both goods are characterized by increasing costs.

Answer: B

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

- 14) Which of the following is NOT illustrated by a production possibilities frontier?

- A) scarcity
- B) opportunity cost
- C) necessity for choice
- D) who gets the goods

Answer: D

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

- 15) A production possibilities frontier figure does NOT illustrate

- A) the limits on production imposed by our limited resources and technology.
- B) the exchange of one good or service for another.
- C) opportunity cost.
- D) attainable and unattainable points.

Answer: B

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

- 16) Any production point outside the production possibilities frontier is

- A) unattainable.
- B) associated with unused resources.
- C) attainable only if prices fall.
- D) attainable only if prices rise.

Answer: A

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

17) Which of the following statements regarding the production possibilities frontier is TRUE?

- A) Points outside the frontier are attainable.
- B) Points inside the frontier are attainable.
- C) Points on the frontier are less efficient than points inside the frontier.
- D) None of the above because all of the above statements are false.

Answer: B

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

18) Jane produces only corn and cloth. Taking account of her preferences for corn and cloth

- A) makes her production possibilities frontier straighter.
- B) makes her production possibilities frontier steeper.
- C) makes her production possibilities frontier flatter.
- D) does not affect her production possibilities frontier.

Answer: D

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

19) On the vertical axis, the production possibilities frontier shows \_\_\_\_\_; on the horizontal axis, the production possibilities frontier shows \_\_\_\_\_.

- A) the quantity of a good; the number of workers employed to produce the good
- B) the quantity of a good; the price of the good
- C) the quantity of a good; a weighted average of resources used to produce the good
- D) the quantity of one good; the quantity of another good

Answer: D

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

20) Scarcity is represented on a production possibilities frontier figure by

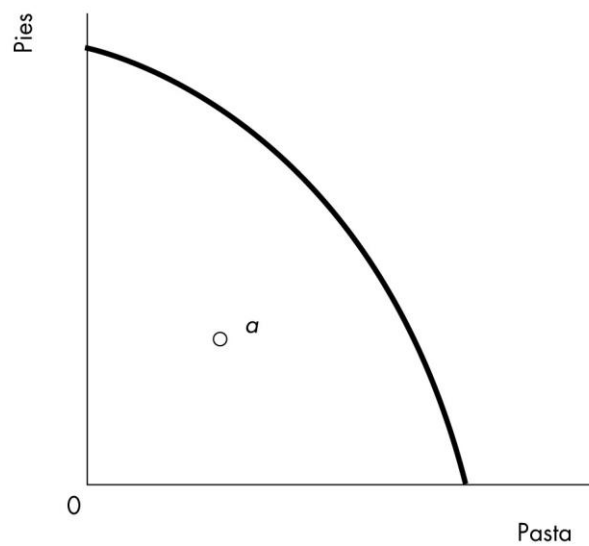
- A) the amount of the good on the horizontal axis forgone.
- B) the fact that there are only two goods in the diagram.
- C) technological progress.
- D) the fact there are attainable and unattainable points.

Answer: D

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking



21) The figure above shows Roger's production possibilities frontier. Point *a* is an \_\_\_\_\_ point and at that point production is \_\_\_\_\_.

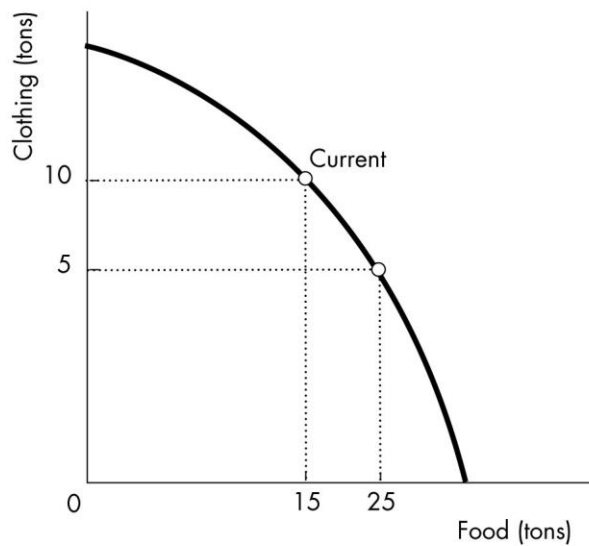
- A) attainable; efficient
- B) attainable; inefficient
- C) unattainable; inefficient
- D) unattainable; efficient

Answer: B

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking



22) The above figure illustrates that if this country wishes to move from its current production point (labeled "Current") and have 10 more tons of food, it can do this by producing

- A) 10 more tons of clothing.
- B) 10 fewer tons of clothing.
- C) 5 more tons of clothing.
- D) 5 fewer tons of clothing.

Answer: D

Topic: Production Possibilities

Skill: Analytical

AACSB: Reflective thinking

23) Suppose the country of Popcorn produces only jets and corn. If Popcorn cannot produce any more jets without giving up corn, we say that Popcorn has achieved

- A) the highest marginal benefit.
- B) production efficiency.
- C) the lowest marginal cost.
- D) the highest opportunity cost.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

24) A society that is producing on its production possibilities frontier is

- A) not utilizing all of its resources.
- B) not being technologically efficient.
- C) producing too much output.
- D) fully utilizing all of its productive resources.

Answer: D

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

25) If a country must decrease current consumption to increase the amount of capital goods it produces today, then it must

- A) be using resources inefficiently today, but will be more efficient in the future.
- B) be producing along the production possibilities frontier today and its production possibilities frontier will shift outward if it produces more capital goods.
- C) must be producing outside the production possibilities frontier and will continue to do so in the future.
- D) must not have private ownership of property and will have to follow planning authorities' decisions today and in the future.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

26) A country that *must* decrease production of one good in order to increase the production of another

- A) must be using resources inefficiently.
- B) must be producing on its production possibilities frontier.
- C) must be producing beyond its production possibilities frontier.
- D) must have private ownership of property.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

27) If an economy is operating at a point inside the production possibilities frontier, then

- A) society's resources are being inefficiently utilized.
- B) the *PPF* curve will shift inward.
- C) society's resources are being used to produce too many consumer goods.
- D) economic policy must retard further growth of the economy.

Answer: A

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking



28) Any point on a production possibilities frontier (*PPF*) itself is

- A) production efficient.
- B) unattainable.
- C) inefficient.
- D) equitable.

Answer: A

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

29) If production point is inside the production possibilities frontier

- A) it is not possible to produce more of both goods.
- B) production is inefficient.
- C) in order to produce more of one good, less of the other must be produced.
- D) production is in the "unattainable" region.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

30) If a society is operating at a point inside its production possibilities frontier, then this society's

- A) resources are being inefficiently utilized.
- B) production possibilities frontier will shift rightward.
- C) resources are being used in the most efficient manner.
- D) economy will grow too fast.

Answer: A

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

31) A president of the United States promises to produce more defense goods without any decreases in the production of other goods. This promise can be valid

- A) if the United States is producing at a point on its production possibilities frontier.
- B) if the United States is producing at a point inside its production possibilities frontier.
- C) if the United States is producing at a point beyond its production possibilities frontier.
- D) only if the production possibilities frontier shifts rightward.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

32) Using the production possibilities frontier model, unemployment is described as producing at a point

- A) on the exact middle of the *PPF* curve.
- B) on either end of the *PPF* curve.
- C) inside the *PPF* curve.
- D) outside the *PPF* curve.

Answer: C

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

33) A reduction in the amount of unemployment

- A) shifts the production possibilities frontier outward.
- B) moves the economy's point of production closer to the production possibilities frontier.
- C) moves the economy's point of production along the production possibilities frontier.
- D) moves the economy's point of production further away from the production possibilities frontier.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

34) A point inside a production possibilities frontier

- A) could indicate that some resources are unemployed.
- B) is unattainable.
- C) is more efficient than points on the production possibilities frontier.
- D) implies that too much capital and not enough labor are being used.

Answer: A

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

35) A point inside a production possibilities frontier

- A) could indicate that resources are misallocated.
- B) is more efficient than a point on the production possibilities frontier.
- C) reflects the fact that more technology needs to be developed to fully employ all resources.
- D) implies that too much labor and not enough capital is being used.

Answer: A

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

36) Production points inside the production possibilities frontier

- A) are unattainable.
- B) are attainable only with the full utilization of all resources.
- C) are associated with unused or misallocated resources.
- D) result in more rapid growth.

Answer: C

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

37) When resources are assigned to inappropriate tasks, that is, tasks for which they are not the best match, the result will be producing at a point

- A) where the slope of the *PPF* is positive.
- B) where the slope of the *PPF* is zero.
- C) inside the *PPF*.
- D) outside the *PPF*.

Answer: C

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

38) Some time ago the government of China required many highly skilled technicians and scientists to engage in unskilled agricultural labor in order to develop "proper social attitudes." This policy probably caused China to produce

- A) at an inappropriate point along its production possibilities frontier.
- B) outside its production possibilities frontier with respect to food, but inside with respect to high-technology goods.
- C) inside its production possibilities frontier with respect to food, but outside with respect to high-technology goods.
- D) inside its production possibilities frontier.

Answer: D

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

39) Sam's production possibilities frontier has good *A* on the horizontal axis and good *B* on the vertical axis. If Sam is producing at a point *inside* his frontier, then he

- A) can increase production of both goods with no increase in resources.
- B) is fully using all his resources.
- C) values good *A* more than good *B*.
- D) values good *B* more than good *A*.

Answer: A

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

40) A situation in which some resources are NOT fully utilized is represented in a production possibilities frontier diagram by

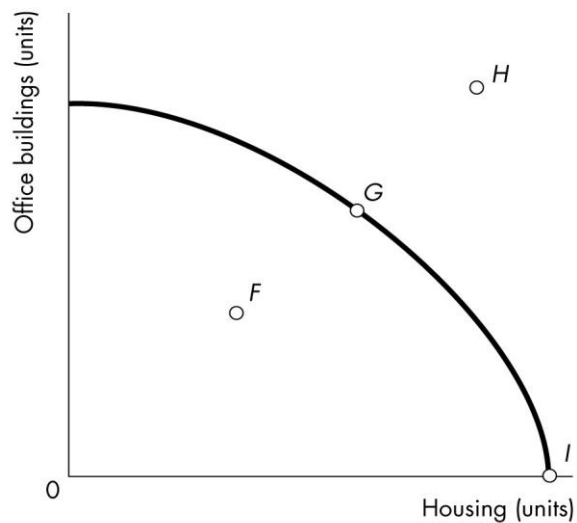
- A) any point on either the horizontal or the vertical axis.
- B) the midpoint of the production possibilities frontier.
- C) a point outside the production possibilities frontier.
- D) a point inside the production possibilities frontier.

Answer: D

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking



41) Consider the *PPF* for office buildings and housing shown in the figure above. Which point in the diagram shows that resources to produce office buildings and housing are being misallocated, unused, or both?

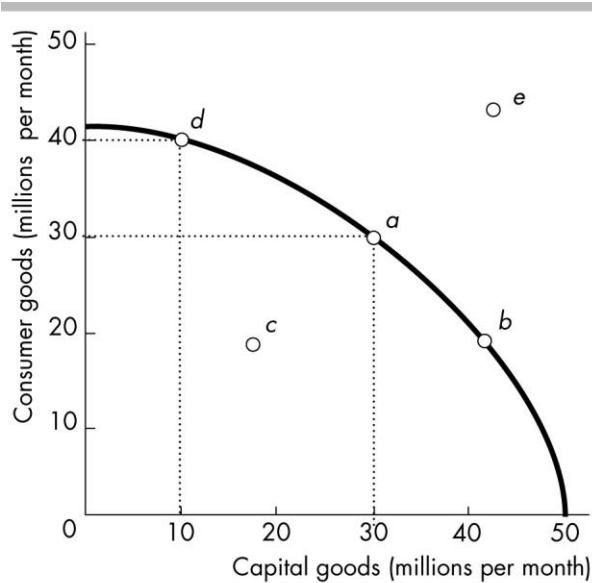
- A) point *F*
- B) point *G*
- C) point *H*
- D) point *I*

Answer: A

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking



42) Refer to the production possibilities frontier in the figure above. Which production point indicates that resources are NOT fully utilized or are misallocated?

- A) point *a*
- B) point *b*
- C) point *c*
- D) point *e*

Answer: C

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

43) Refer to the production possibilities frontier in the figure above. Which production point is unattainable?

- A) point *a*
- B) point *b*
- C) point *c*
- D) point *e*

Answer: D

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

44) Refer to the production possibilities frontier in the figure above. Production point \_\_\_\_\_ represents an \_\_\_\_\_ production point.

- A) *b*; unattainable
- B) *c*; unattainable
- C) *e*; inefficient
- D) *c*; inefficient

Answer: D

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

45) In the figure above, moving from production at point *d* to production at point *a* requires

- A) technological change.
- B) a decrease in unemployment.
- C) decreasing the output of consumer goods in order to boost the output of capital goods.
- D) both capital accumulation and a decrease in unemployment.

Answer: C

Topic: Tradeoff

Skill: Analytical

AACSB: Reflective thinking

46) Refer to the production possibilities frontier in the figure above. Suppose a country is producing at point *a*. A movement to point \_\_\_\_\_ means that the country \_\_\_\_\_.

- A) *d*; must give up 20 million capital goods
- B) *e*; is not operating efficiently
- C) *d*; gives up 10 million consumer goods
- D) *b*; is producing at an inefficient point

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

47) Refer to the production possibilities frontier in the figure above. If the country moves from point *a* to point *c*, the opportunity cost of the move is

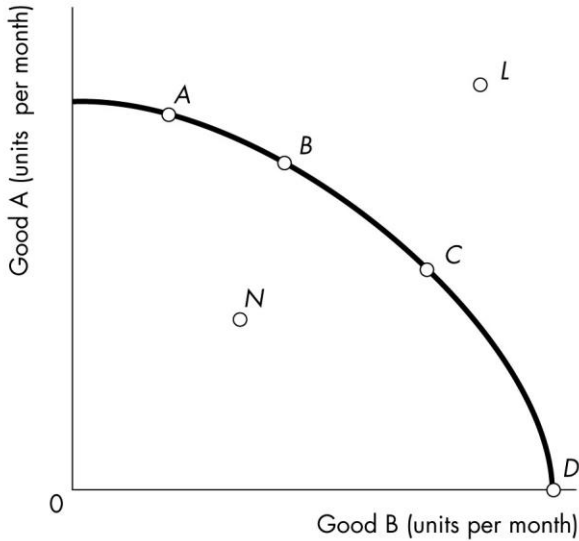
- A) 30 million capital goods.
- B) 20 million capital goods.
- C) 10 million capital goods.
- D) 10 million consumption goods.

Answer: B

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



- 48) Point *C* on the production possibilities frontier in the above diagram illustrates
- A) a point that achieves production efficiency.
  - B) a combination of goods and services that cannot be produced efficiently
  - C) all goods and services that are desired but cannot be produced due to scarce resources.
  - D) a production point that has underutilization of resources

Answer: A

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

- 49) In the above figure, which point represents an unattainable production combination of the two goods?

- A) point *C*
- B) point *L*
- C) point *D*
- D) point *N*

Answer: B

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

- 50) In the above figure, which point represents an attainable but inefficient production point?

- A) point *C*
- B) point *N*
- C) point *L*
- D) point *D*

Answer: B

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

51) A tradeoff is

- A) represented by a point inside a *PPF*.
- B) represented by a point outside a *PPF*.
- C) a constraint that requires giving up one thing to get another.
- D) a transaction at a price either above or below the equilibrium price.

Answer: C

Topic: Tradeoff

Skill: Conceptual

AACSB: Reflective thinking

52) When producing goods and services along a *PPF*, tradeoffs exist because

- A) not all production is efficient.
- B) society has only a limited amount of productive resources.
- C) buyers and sellers often must negotiate prices.
- D) human wants and needs are limited at a particular point in time.

Answer: B

Topic: Tradeoff

Skill: Conceptual

AACSB: Reflective thinking

53) Considering a *PPF* with health care services on the vertical axis and other goods and services on the horizontal axis, the increasing production of health care services in the United States as a result of the aging population represents

- A) a movement upward along the *PPF*.
- B) an outward shift of the *PPF* from the vertical axis.
- C) an outward shift of the *PPF* from the horizontal axis.
- D) a movement downward along the *PPF*.

Answer: A

Topic: Tradeoff

Skill: Conceptual

AACSB: Reflective thinking

54) A tradeoff is illustrated by

- A) a point inside the *PPF*.
- B) a point outside the *PPF*.
- C) a change in the slope of the *PPF*.
- D) the negative slope of the *PPF*.

Answer: D

Topic: Tradeoff

Skill: Conceptual

AACSB: Reflective thinking



55) Moving from one point on the production possibilities frontier to another \_\_\_\_\_.

- A) involves a tradeoff but does not incur an opportunity cost
- B) involves an opportunity cost but no tradeoff
- C) involves a tradeoff and incurs an opportunity cost
- D) involves no tradeoff but it does incur an opportunity cost

Answer: C

Topic: Opportunity Cost and Tradeoff

Skill: Conceptual

AACSB: Reflective thinking

56) When we choose a particular option, we must give up alternative options. The highest-valued alternative forgone is the \_\_\_\_\_ of the option chosen.

- A) opportunity cost
- B) comparative advantage
- C) nonmonetary cost
- D) absolute advantage

Answer: A

Topic: Opportunity Cost

Skill: Recognition

AACSB: Reflective thinking

57) Ted can study for his economics exam or go to a concert. He decides to study for his economics exam instead of going to the concert. The concert he will miss is Ted's \_\_\_\_\_ of studying for the exam.

- A) opportunity cost
- B) explicit cost
- C) implicit cost
- D) discretionary cost

Answer: A

Topic: Opportunity Cost

Skill: Recognition

AACSB: Reflective thinking

58) Opportunity cost is best defined as

- A) the amount of money that an individual is willing to pay to purchase a good that means a great deal to that person.
- B) the amount of money lost by one individual in an exchange process so that another individual might gain.
- C) the highest-valued alternative that is forgone when choosing among various alternatives.
- D) a situation in which one individual cannot have an absolute advantage over another individual in the production of all goods.

Answer: C

Topic: Opportunity Cost

Skill: Recognition

AACSB: Reflective thinking

59) Most students attending college pay tuition and are unable to hold a full-time job. For these students, tuition is

- A) part of the opportunity cost of going to college. So are their forgone earnings from not holding a full-time job.
- B) part of the opportunity cost of going to college. Their forgone earnings from not holding a full-time job are not part of the opportunity cost of attending college.
- C) not part of the opportunity cost of going to college, but their forgone earnings from not holding a full-time job are part of the opportunity cost of attending college.
- D) not part of the opportunity cost of going to college. Neither are their forgone earnings from not holding a full-time job.

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

60) If Sam is producing at a point on his production possibilities frontier, then he

- A) cannot produce any more of either good.
- B) can produce more of one good only by producing less of the other.
- C) will be unable to gain from trade.
- D) is not subject to scarcity.

Answer: B

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

61) Opportunity cost is illustrated in a production possibilities frontier (*PPF*) by a movement

- A) from the region within the *PPF* to a point on the *PPF*.
- B) from the region within the *PPF* to the region outside of the *PPF*.
- C) from the region outside of the *PPF* to a point on the *PPF*.
- D) along the *PPF* where to gain more of one good it is necessary to give some of another good.

Answer: D

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

62) When moving along the production possibilities frontier, opportunity cost is measured as the

- A) increase in the quantity produced of one good divided by the decrease in the quantity produced of another good.
- B) decrease in the quantity produced of one good divided by the increase in the quantity produced of another good.
- C) quantity produced of one good divided by the quantity produced of another good.
- D) quantity produced of one good multiplied by the quantity produced of another good.

Answer: B

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

63) While producing on the production possibilities frontier, if additional units of a good could be produced at a constant opportunity cost, the production possibilities frontier would be

- A) bowed outward.
- B) bowed inward.
- C) positively sloped.
- D) a straight line.

Answer: D

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

64) Opportunity cost is represented on the production possibilities frontier by

- A) attainable and unattainable points.
- B) efficient and inefficient points.
- C) the amount of good Y forgone when more of good X is produced.
- D) technological progress.

Answer: C

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

65) As residents of developing countries increase their chocolate consumption, the increased production of cocoa results in

- A) increased opportunity cost of cocoa production.
- B) decreased opportunity cost of cocoa production.
- C) no change in production of other goods and services.
- D) increased production of other goods and services.

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

66) At one point along a *PPF*, 50 tons of coffee and 100 tons of bananas are produced. At another point along the same *PPF*, 30 tons of coffee and 140 tons of bananas are produced. The opportunity cost of a ton of coffee between these points is

- A)  $\frac{7}{5}$  of a ton of bananas per ton of coffee.
- B)  $\frac{1}{2}$  of a ton of bananas per ton of coffee.
- C)  $\frac{5}{7}$  of a ton of bananas per ton of coffee.
- D) 2 tons of bananas per ton of coffee.

Answer: D

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

67) When operating on its *PPF*, a country can produce 2 tons of butter and 200 cars OR 3 tons of butter and 150 cars. The opportunity cost of 1 ton of butter is \_\_\_\_\_ cars per ton of butter.

- A) 300
- B) 200
- C) 50
- D) 0.75

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

68) In one day, Sue can change the oil on 20 cars or change the tires on 20 cars. In one day, Fred can change the oil on 20 cars or change the tires on 10 cars. Sue's opportunity cost of changing oil is \_\_\_\_\_ than Fred's and her opportunity cost for changing tires is \_\_\_\_\_ than Fred's.

- A) greater; less
- B) less; greater
- C) less; less
- D) greater; greater

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

69) At one point along a *PPF*, 10 pizzas and 7 sandwiches can be produced. At another point along the same *PPF*, 9 pizzas and 10 sandwiches can be produced. The opportunity cost of a pizza between these points is \_\_\_\_\_ per pizza.

- A) 7/10 of a sandwich
- B) 10/7 of a sandwich
- C) 1/3 of a sandwich
- D) 3 sandwiches

Answer: D

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

70) At one point along a *PPF* 40 tons of wheat are produced while 80 tons of rice are produced. At another point along the same *PPF*, 41 tons of wheat are produced while 70 tons of rice are produced. The opportunity cost of producing a ton of wheat between these points is \_\_\_\_\_ per ton of wheat.

- A) 1/2 ton of rice
- B) 10 tons of rice
- C) 1/10 ton of rice
- D) 4/7 ton of rice

Answer: B

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

Point	Production of grain (tons)	Production of cars (cars)
A	0	30
B	2	28
C	4	24
D	6	18
E	8	10
F	10	0

71) The table above lists six points on the production possibilities frontier for grain and cars. Given this information, which of the following combinations is unattainable?

- A) 6 tons of grain and 18 cars
- B) 4 tons of grain and 26 cars
- C) 2 tons of grain and 27 cars
- D) 7 tons of grain and 10 cars

Answer: B

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

72) The table above lists six points on the production possibilities frontier for grain and cars. From this information you can conclude that production is inefficient if this economy produces

- A) 6 tons of grain and 18 cars.
- B) 4 tons of grain and 26 cars.
- C) 2 tons of grain and 27 cars.
- D) 8 tons of grain and 10 cars.

Answer: C

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

73) The table above lists six points on the production possibilities frontier for grain and cars. What is the opportunity cost of producing the 5th ton of grain?

- A) 16 cars per ton of grain
- B) 6 cars per ton of grain
- C) 3 cars per ton of grain
- D) 2 cars per ton of grain

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

74) The table above lists six points on the production possibilities frontier for grain and cars. What is the opportunity cost of producing the 26th car?

- A) 2 tons of grain per car
- B) 4 tons of grain per car
- C) 0.25 tons of grain per car
- D) 0.5 tons of grain per car

Answer: D

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

Point	Production chocolate bars	Production cans of cola
A	0	100
B	10	90
C	20	70
D	30	40
E	40	0

75) The above table shows production points on Sweet-Tooth Land's production possibilities frontier. Which of the following statements is TRUE?

- A) Producing 0 chocolate bars and 100 cans of cola is both attainable and efficient.
- B) Producing 20 chocolate bars and 80 cans of cola is attainable, but inefficient.
- C) Producing 30 chocolate bars and 38 cans of cola is only attainable with an increase in technology.
- D) Producing 40 chocolate bars and 0 cans of cola is unattainable and inefficient.

Answer: A

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

76) The above table shows production points on Sweet-Tooth Land's production possibilities frontier. Which of the following is an example of a point that is inefficient?

- A) 0 chocolate bars and 100 cans of cola
- B) 20 chocolate bars and 80 cans of cola
- C) 32 chocolate bars and 40 cans of cola
- D) 38 chocolate bars and 0 cans of cola

Answer: D

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

77) The above table shows production points on Sweet-Tooth Land's production possibilities frontier. What is the opportunity cost of *one* chocolate bar if Sweet-tooth Land moves from point C to point D?

- A) 30 cans of cola per chocolate bar
- B) 10 cans of cola per chocolate bar
- C) 3 cans of cola per chocolate bar
- D) 1/3 can of cola per chocolate bar

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

78) The above table shows production points on Sweet-Tooth Land's production possibilities frontier. What is the opportunity cost of *one* can of cola if Sweet-tooth Land moves from point C to point B?

- A) 20 chocolate bars per can of cola
- B) 10 chocolate bars per can of cola
- C) 2 chocolate bars per can of cola
- D) 1/2 chocolate bars per can of cola

Answer: D

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

79) The above table shows production points on Sweet-Tooth Land's production possibilities frontier. A movement from \_\_\_\_\_ represents the greatest opportunity cost of increasing cola production.

- A) point E to point D
- B) point D to point C
- C) point C to point B
- D) point B to point A

Answer: D

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

Point	Production of X	Production of Y
A	0	40
B	3	36
C	6	28
D	9	16
E	12	0

80) The above table shows production combinations on a country's production possibilities frontier. Which of the following is an example of a point that is unattainable?

- A) 0 units of good X and 40 units of good Y
- B) 6 units of good X and 28 units of good Y
- C) 10 units of good X and 16 units of good Y
- D) 3 units of good X and 35 units of good Y

Answer: C

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking

81) The above table shows production combinations on a country's production possibilities frontier. Which of the following is an example of a production point that is inefficient?

- A) 0 units of good X and 40 units of good Y
- B) 6 units of good X and 28 units of good Y
- C) 10 units of good X and 16 units of good Y
- D) 3 units of good X and 35 units of good Y

Answer: D

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

82) The above table shows production combinations on a country's production possibilities frontier. Which of the following points signifies efficient production?

- A) 0 units of good X and 40 units of good Y
- B) 3 units of good X and 25 units of good Y
- C) 10 units of good X and 16 units of good Y
- D) 12 units of good X and 1 unit of good Y

Answer: A

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking



83) The above table shows production combinations on a country's production possibilities frontier. The opportunity cost of increasing the production of Y from 16 to 28 units is \_\_\_\_\_ units of good X per unit of good Y.

A) 12

B) 6

C) 3

D) There is no opportunity cost when moving from one point to another along a production possibilities frontier so none of the above answers is correct.

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

84) The above table shows production combinations on a country's production possibilities frontier. What is the opportunity cost of *one* unit of Y when the production of good Y increases from 16 to 28 units?

A) 4 units of good X per unit of good Y

B) 3 units of good X per unit of good Y

C) 1/4 unit of good X per unit of good Y

D) There is no opportunity cost when moving from one point to another along a production possibilities frontier.

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

85) The above table shows production combinations on a country's production possibilities frontier. What is the opportunity cost of increasing the production of X from 0 to 3 units?

A) 40 units of good Y per unit of good X

B) 3 units of good Y per unit of good X

C) 4/3 units of good Y per unit of good X

D) 0 units of good Y per unit of good X

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

86) The above table shows production combinations on a country's production possibilities frontier. A movement from \_\_\_\_\_ involves the *greatest* opportunity cost of increasing the production of good Y.

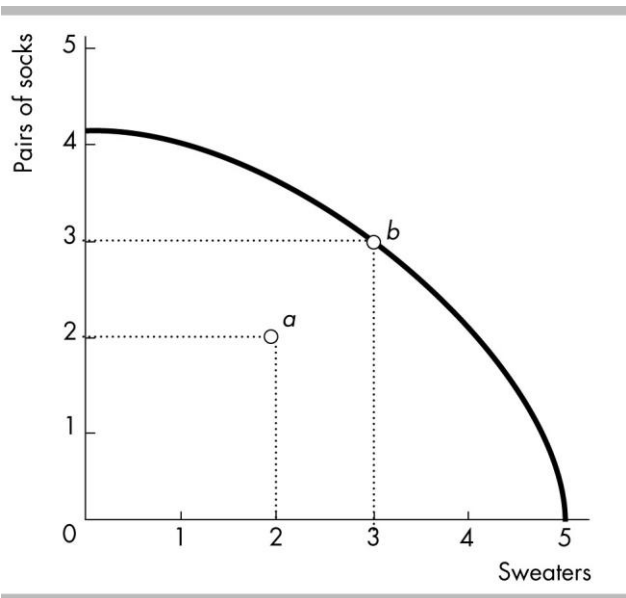
- A) point E to point D
- B) point D to point C
- C) point C to point B
- D) point B to point A

Answer: D

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



87) The opportunity cost of moving from point *a* to point *b* in the above figure is \_\_\_\_\_.

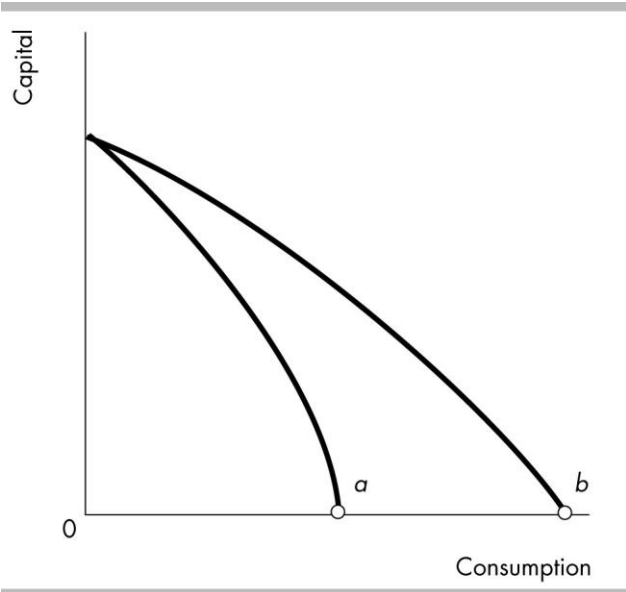
- A) zero
- B)  $3/2$  pairs of socks per sweater
- C) 3 pairs of socks
- D) 2 sweaters

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



88) The opportunity cost of producing a unit of consumption at point *b* in the figure \_\_\_\_\_ point *a*.

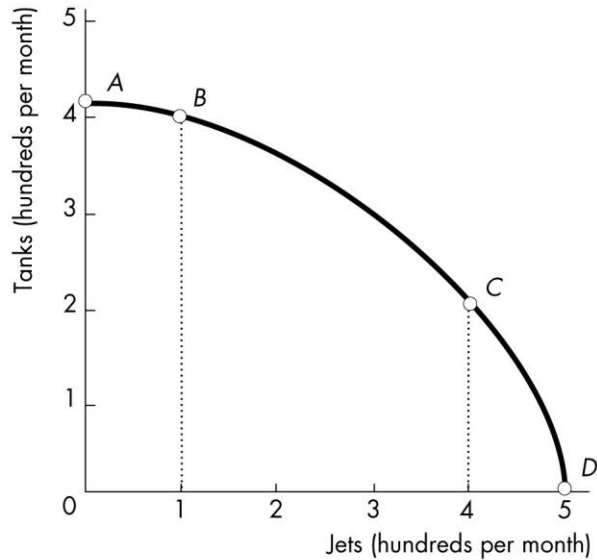
- A) is greater than at
- B) is less than at
- C) cannot be compared with
- D) is the same as

Answer: B

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking



89) In the above figure, which of the following is TRUE regarding the movements from point *A* to *B* and from point *C* to *D*?

- I) The movement from point *A* to *B* shows that the economy has chosen to produce 100 more jets.
- II) The movement from point *C* to *D* shows that the economy has chosen to produce 100 more jets.
- III) The movement from point *A* to *B* and from point *C* to *D* have the same opportunity cost.

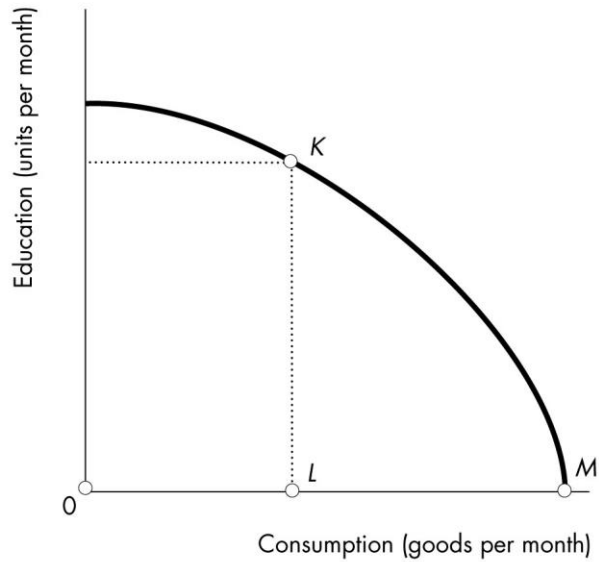
- A) I and II
- B) I and III
- C) II and III
- D) I, II and III

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



90) Molly just graduated from high school. The figure shows her possibilities frontier. If Molly goes to college, she will move from point *M* to point *K*. In terms of consumption goods, Molly's opportunity cost of going to college is

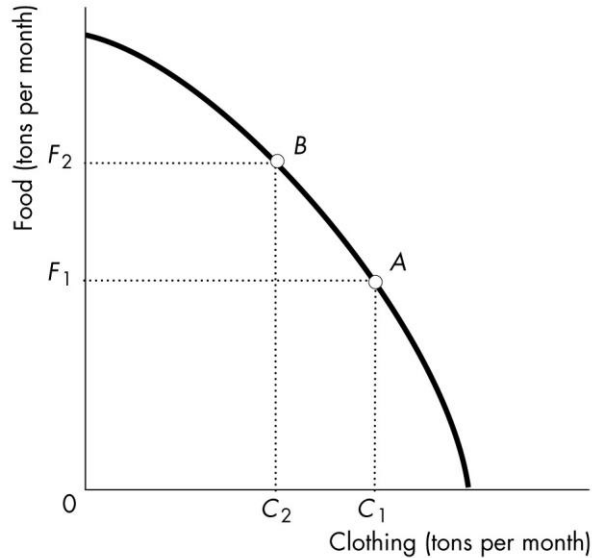
- A) *MK*.
- B) *OL*.
- C) *KL*.
- D) *LM*.

Answer: D

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



- 91) In the figure above, the curve is known as the
- A) production possibilities frontier.
  - B) substitution options frontier.
  - C) production function.
  - D) opportunity cost curve.

Answer: A

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

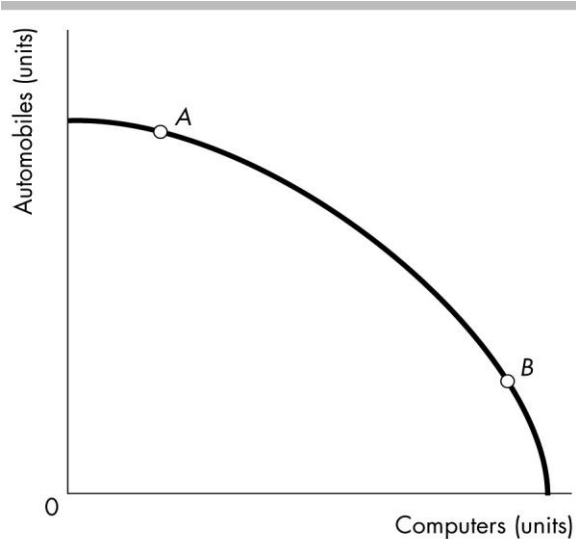
- 92) The figure above illustrates that if this country wishes to have  $F_2 - F_1$  additional food by moving from point A to point B, it will
- A) have to find additional workers, because the country already is operating on its production possibilities frontier.
  - B) be unable to do so until additional technological progress is made.
  - C) have to sacrifice  $C_1 - C_2$  clothing in order to free the resources necessary to produce the additional food.
  - D) require that all the unemployed resources in the country be put to work.

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



93) The bowed outward shape of the production possibilities frontier in the above figure indicates that

- A) some resources are better suited for producing computers.
- B) the opportunity cost of producing more computers decreases as more computers are produced.
- C) computer technology is subject to the principle of decreasing costs.
- D) All of the above answers are correct.

Answer: A

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

94) According to the figure above, the opportunity cost of producing another computer is

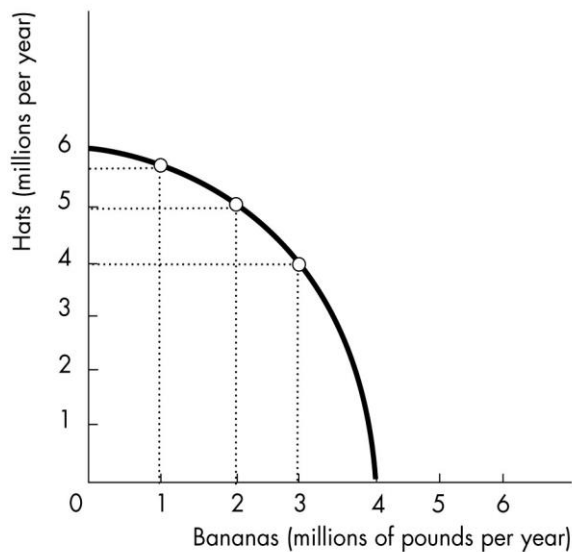
- A) higher at A.
- B) higher at B.
- C) the same at every point along the frontier.
- D) different at most points along the frontier but equal at points A and B because they are equally distant from the axes.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking



95) In the production possibilities frontier depicted in the figure above, which of the following combinations of hats and bananas is unattainable?

- A) 4 million pounds of bananas and 4 million hats
- B) 2 million pounds of bananas and 5 million hats
- C) 0 pounds of bananas and 6 million hats
- D) 1 million pounds of bananas and 3 million hats

Answer: A

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

96) In the production possibilities frontier depicted in the figure above, which of the following combinations of hats and bananas is inefficient?

- A) 4 million pounds of bananas and 4 million hats
- B) 2 million pounds of bananas and 5 million hats
- C) 0 pounds of bananas and 6 million hats
- D) 1 million pounds of bananas and 3 million hats

Answer: D

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking



97) In the production possibilities frontier depicted in the figure above, what is the opportunity cost of increasing the production of bananas from two million pounds to three million pounds?

- A) 1/2 hat per pound of bananas
- B) 1 hat per pound of bananas
- C) 2 hats per pound of bananas
- D) 3 hats per pound of bananas

Answer: B

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

98) Jane produces only corn, measured in tons, and cloth, measured in bolts. For her, the opportunity cost of one more ton of corn is

- A) the same as the opportunity cost of one more bolt of cloth.
- B) the inverse of the opportunity cost of one more bolt of cloth.
- C) the ratio of all the bolts of cloth she produces to all the tons of corn she produces.
- D) the ratio of all the tons of corn she produces to all the bolts of cloth she produces.

Answer: B

Topic: Opportunity Cost is a Ratio

Skill: Analytical

AACSB: Reflective thinking

99) The principle of increasing opportunity cost leads to

- A) a production possibilities frontier (*PPF*) that is bowed inward from the origin.
- B) a production possibilities frontier (*PPF*) that is bowed outward from the origin.
- C) an inward shift of the production possibilities frontier (*PPF*).
- D) an outward shift of the production possibilities frontier (*PPF*).

Answer: B

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

100) A *PPF* bows outward because

- A) not all resources are equally productive in all activities.
- B) consumers prefer about equal amounts of the different goods.
- C) entrepreneurial talent is more abundant than human capital.
- D) resources are used inefficiently.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

101) Generally, opportunity costs increase and the production possibilities frontier bows outward. Why?

- A) Unemployment is inevitable.
- B) Resources are not equally useful in all activities.
- C) Technology is slow to change.
- D) Labor is scarcer than capital.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Recognition

AACSB: Reflective thinking

102) Increasing opportunity cost occurs along a production possibilities frontier because

- A) resources are not equally productive in all activities.
- B) increasing wants need to be satisfied.
- C) in order to produce more of one good decreasing amounts of another good must be sacrificed.
- D) production takes time.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

103) Increasing opportunity cost while moving along a production possibilities frontier is the result of

- A) taxes.
- B) firms' needs to produce profits.
- C) the fact that it is more difficult to use resources efficiently the more society produces.
- D) the fact that resources are not equally productive in alternative uses.

Answer: D

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

104) Increasing opportunity cost implies that

- A) producing additional units of one good results in proportionately smaller reductions in the output of the other good.
- B) producing additional units of one good results in increasing amounts of lost output of the other good.
- C) the production possibilities frontier will be a straight line.
- D) the society will be producing inside its production possibilities frontier.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

105) When the production possibilities frontier is bowed outwards, the opportunity cost of producing more of one good

- A) increases in terms of the amount foregone of the other good.
- B) decreases in terms of the amount foregone of the other good.
- C) remains constant.
- D) cannot be determined.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

106) As a country that has a bowed-out production possibilities frontier produces more of one good, the opportunity cost of a unit of that good \_\_\_\_\_.

- A) might increase or decrease
- B) remains the same
- C) increases
- D) decreases

Answer: C

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

107) As we move along a bowed-out production possibility frontier, producing more tacos and less pizza, the opportunity cost of a pizza \_\_\_\_\_.

- A) increases
- B) remains the same
- C) decreases
- D) increases and then decreases

Answer: C

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

108) The production possibilities frontier bows outward because

- A) opportunity costs are decreasing as the production of a good increases.
- B) opportunity costs are increasing as the production of a good increases.
- C) opportunity costs are fixed as the production of a good increases.
- D) resources are of uniform quality.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

- 109) The fact of increasing opportunity costs means that a production possibilities frontier will
- A) be a straight line.
  - B) reach a maximum and then gradually decrease.
  - C) bow outward.
  - D) shift outward over time.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

- 110) A bowed outward production possibilities frontier occurs when
- A) opportunity costs are constant.
  - B) resources are not scarce.
  - C) as more of a good is produced, producing additional units of it require greater reductions in the other good.
  - D) the society is operating on the production possibilities frontier.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

- 111) When the production possibilities frontier bows outward from the origin
- A) some of society's resources are unemployed.
  - B) opportunity costs are constant.
  - C) opportunity costs are increasing.
  - D) opportunity costs are decreasing.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

- 112) The slope of a production possibilities frontier that displays increasing opportunity cost is
- A) positive and constant.
  - B) negative and constant.
  - C) steeper near the horizontal intercept than near the vertical intercept.
  - D) steeper near the vertical intercept than near the horizontal intercept.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

113) Assuming farmers can plant either corn or soybeans, as U.S. farmers plant more corn to meet rising global demand

- A) the opportunity cost of producing corn increases.
- B) the opportunity cost of producing corn decreases.
- C) the U.S. *PPF* for corn and other goods and services shifts outward.
- D) the United States produces at a point beyond its *PPF*.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

114) The fact that individual productive resources are NOT equally useful in all activities

- A) implies that a production possibilities frontier will be bowed outward.
- B) implies that gain from specialization and trade is unlikely.
- C) follows from the law of demand.
- D) implies a linear production possibilities frontier.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

115) Consider a *PPF* for tapes and soda. If the opportunity cost of a tape increases as the quantity of tapes produced increases and also the opportunity cost of a soda increases as the quantity of soda produced increases, then the *PPF* between the two goods will be

- A) a straight, downward-sloping line.
- B) a straight, upward-sloping line.
- C) bowed outward.
- D) All of the above are possible and more information is needed to determine which answer is correct.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

116) One point on a *PPF* shows production levels at 50 tons of coffee and 100 tons of bananas. Remaining on the *PPF*, an increase of banana production to 140 tons shows coffee production at 30 tons. Still remaining on the *PPF*, coffee production at 10 tons allows banana production at 160 tons. The opportunity cost of a ton of bananas is

- A) constant because coffee production decreased by the same amount each time.
- B) decreasing, since the increase in banana production is less at each point considered.
- C) 16 to 1, that is every 1 ton of coffee given up will result in 16 more tons of bananas.
- D) increasing from 1/2 ton of coffee per ton of bananas to 1 ton of coffee per ton of bananas.

Answer: D

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

117) The nation's production possibilities frontier is bowed outward. Suppose that the government decides to increase the production of armaments by \$20 billion, and that as a result the output of consumer goods falls by \$20 billion. If a further \$20 billion increase beyond the initial \$20 billion increase in armaments output is sought, we can expect that the output of consumer goods and services will fall further by

- A) less than \$20 billion.
- B) \$20 billion.
- C) more than \$20 billion.
- D) There is not enough information to determine the answer.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

Production possibilities

Possibility	Pizza (per hour)	Soda (cases per hour)
A	0	100
B	1	95
C	2	80
D	3	60
E	4	35
F	5	0

118) In the above table, the production of 3 pizzas and 80 cases of soda is

- A) impossible unless more resources become available or technology improves.
- B) feasible but would involve unemployed or misallocated resources.
- C) possible only if the economy produces with maximum efficiency.
- D) possible only if there is inflation.

Answer: A

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

119) In the above table, the production of 3 pizzas and 35 cases of soda is

- A) impossible unless more resources become available.
- B) feasible but would involve unemployed or misallocated resources.
- C) possible only if the economy produces with maximum efficiency.
- D) possible only if there is inflation.

Answer: B

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

120) In the above table, the opportunity cost of the 2nd pizza is

- A) 0 cases of soda per pizza.
- B) 15 cases of soda per pizza.
- C) 95 cases of soda per pizza.
- D) 80 cases of soda per pizza.

Answer: B

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

121) Based on the above table, as the production of pizza increases, the opportunity cost of pizza in terms of forgone cases of soda

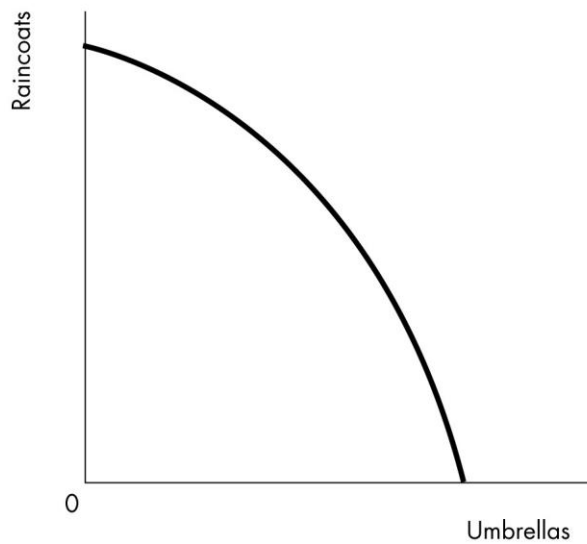
- A) increases.
- B) decreases.
- C) does not change.
- D) initially increases then decreases.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



122) As Rainclouds Inc. moves downward along its production possibilities frontier, illustrated in the figure above, the opportunity cost of a raincoat \_\_\_\_\_.

- A) decreases
- B) depends on the initial quantity produced
- C) increases
- D) remains the same

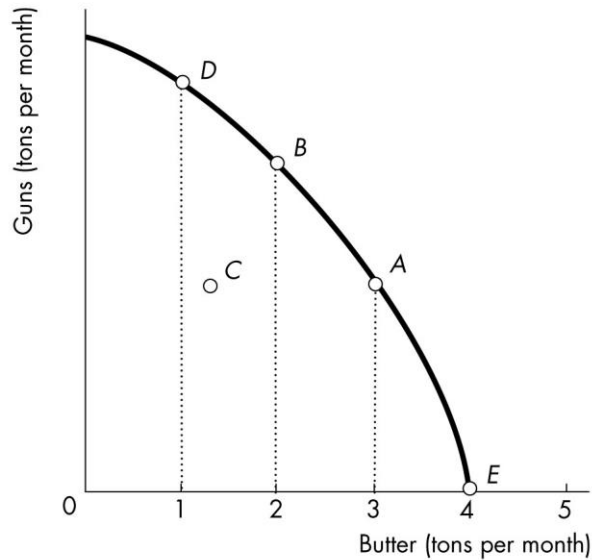
Answer: A

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking





- 123) In the figure above, the point labeled C in the production possibilities frontier
- A) is unattainable; it is beyond the productive capability of this country.
  - B) represents a highly desirable output level in the long run, because it conserves scarce resources.
  - C) represents either unemployed or inefficiently utilized resources.
  - D) represents the maximum sustainable output level for this nation in the long run.

Answer: C

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

- 124) The country whose production possibilities frontier is illustrated above is currently at position A on the production possibilities frontier. If it wishes to move to position B, it will
- A) find this change impossible to achieve given the resources it currently possesses.
  - B) have to employ all currently unemployed resources to accomplish this.
  - C) incur an opportunity cost of having to give up some butter in order to make the additional amount of guns desired.
  - D) be able to make the desired switch only if there is a significant improvement in the technology available to the nation.

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

- 125) In the figure above, moving from point *B* to point *D*  
 A) has an opportunity cost of one ton of butter per month.  
 B) has an opportunity cost of one ton of guns per month.  
 C) requires an increase in technology.  
 D) is impossible.

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

- 126) In the figure above, which of the following movements has the largest opportunity cost?

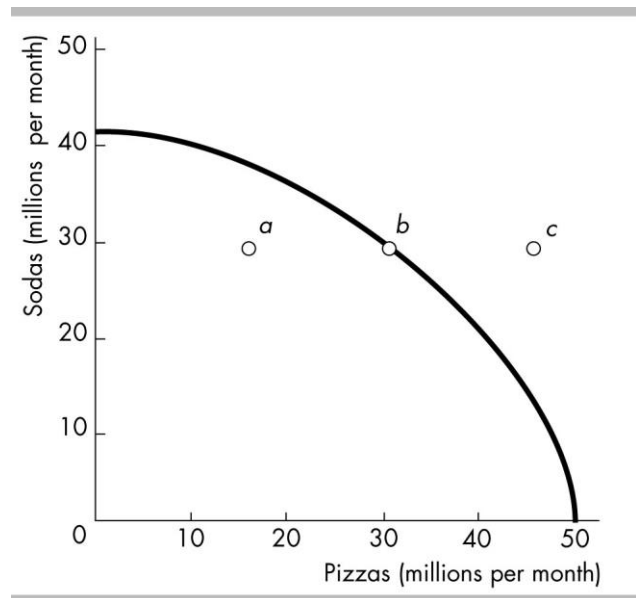
- A) from point *C* to point *B*  
 B) from point *C* to point *A*  
 C) from point *B* to point *A*  
 D) from point *A* to point *E*

Answer: D

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



- 127) A *PPF*, such as the one above, that bows outward illustrates

- A) decreasing opportunity cost.  
 B) increasing opportunity cost.  
 C) that technology is improving.  
 D) that productivity is falling.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

128) In the figure above

- A) moving from point *a* to point *b* would require new technology.
- B) production at point *b* is efficient whereas production at point *a* is not efficient.
- C) some resources must be unemployed at point *c*.
- D) opportunity costs are decreasing.

Answer: B

Topic: Production Efficiency

Skill: Analytical

AACSB: Reflective thinking

129) As we increase the production of computers, we find that we must give up larger and larger amounts of DVD players per computer.

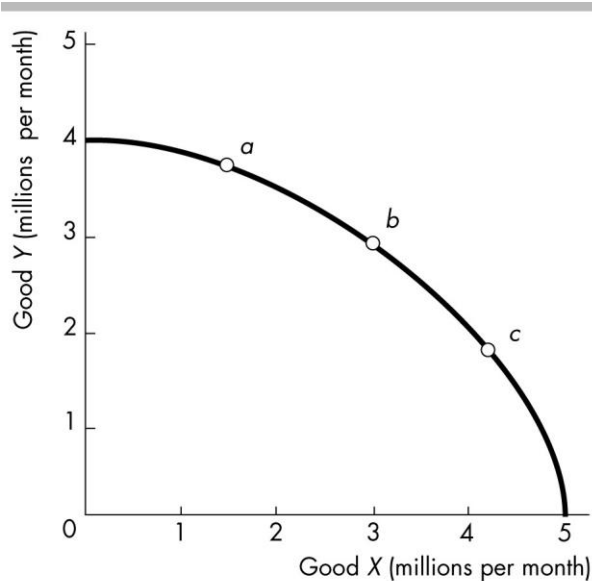
- A) This situation illustrates increasing opportunity cost.
- B) As a result, we should specialize in the production of DVD players.
- C) The production possibilities frontier for computers and DVD players is a straight line.
- D) DVD players will be more highly regarded by consumers than computers.

Answer: A

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



130) As output moves from point *a* to point *b* to point *c* along the *PPF* in the above figure, the opportunity cost of one more unit of good *X*

- A) rises. The opportunity cost of one more unit of good *Y* also rises.
- B) rises. The opportunity cost of one more unit of good *Y* falls.
- C) falls. The opportunity cost of one more unit of good *Y* rises.
- D) falls. The opportunity cost of one more unit of good *Y* also falls.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

131) Refer to the production possibilities frontier in the figure above. More of good *X* must be given up per unit of good *Y* gained when moving from point *b* to point *a* than when moving from point *c* to point *b*. This fact

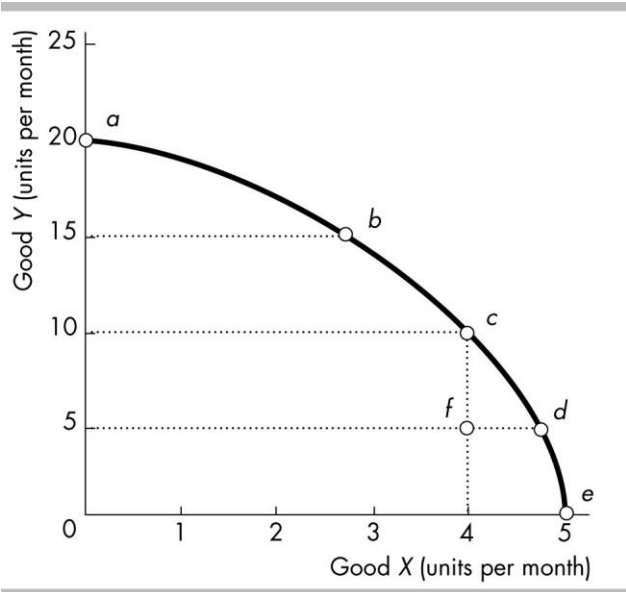
- A) illustrates decreasing opportunity cost.
- B) illustrates increasing opportunity cost.
- C) indicates that good *X* is more capital intensive than good *Y*.
- D) indicates that good *Y* is more capital intensive than good *X*.

Answer: B

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



132) The figure above illustrates Mary's production possibilities frontier. If Mary wants to move from point *b* to point *c*, she must

- A) improve technology.
- B) increase the accumulation of capital.
- C) give up some of good *Y* in order to obtain more of good *X*.
- D) give up some of good *X* in order to obtain more of good *Y*.

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

133) The above figure illustrates Mary's production possibilities frontier. If Mary wants to move from point *d* to point *c*, she must

- A) improve technology.
- B) increase her accumulation of capital.
- C) give up some of good *X* in order to obtain more of good *Y*.
- D) give up some of good *Y* in order to obtain more of good *X*.

Answer: C

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

134) The above figure illustrates Mary's production possibilities frontier. Which of the following movements show opportunity costs increasing?

- A) point *a* to point *b* to point *c*
- B) point *a* to point *f*
- C) point *f* to point *a*
- D) point *c* to point *f* to point *d*

Answer: A

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

135) Refer to the production possibilities frontier figure above. Which of the following movements requires the largest opportunity cost, in terms of good *X* forgone, per extra unit of good *Y*?

- A) from point *e* to point *d*
- B) from point *d* to point *c*
- C) from point *c* to point *b*
- D) from point *b* to point *a*

Answer: D

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

136) Refer to the production possibilities frontier in the figure above. Which of the following movements requires the largest opportunity cost, in terms of good *Y* forgone, per extra unit of good *X*?

- A) from point *a* to point *b*
- B) from point *b* to point *c*
- C) from point *c* to point *d*
- D) from point *d* to point *e*

Answer: D

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

Point	Production of X	Production of Y
a	0	40
b	4	36
c	8	28
d	12	16
e	16	0

137) Refer to the table above, which gives five points on a nation's *PPF*. The production of 7 units of X and 28 units of Y is

- A) impossible given the available resources.
- B) possible but leaves some resources less than fully used or misallocated.
- C) on the production possibilities frontier between points *c* and *d*.
- D) on the production possibilities frontier between points *b* and *c*.

Answer: B

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

138) Refer to the table above, which gives five points on a nation's *PPF*. The opportunity cost of increasing the production of Y from 16 to 36 units is a total of

- A) 1/5 unit of X per unit of Y.
- B) 2/5 unit of X per unit of Y.
- C) 1/2 unit of X per unit of Y.
- D) 3/5 unit of X per unit of Y.

Answer: B

Topic: Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

139) Refer to the table above, which gives five points on a nation's *PPF*. As we increase the production of X,

- A) the output of Y increases.
- B) unemployment increases.
- C) the opportunity cost of each new unit of X increases.
- D) the opportunity cost of each new unit of X decreases.

Answer: C

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

140) If the United States can increase its production of automobiles without decreasing its production of any other good, the United States must have been producing at a point

A) within its *PPF*.

B) on its *PPF*.

C) beyond its *PPF*.

D) None of the above is correct because increasing the production of one good without decreasing the production of another good is impossible.

Answer: A

Topic: Study Guide Question, Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

141) Production points inside the *PPF* are

A) efficient but not attainable.

B) efficient and attainable.

C) inefficient and not attainable.

D) inefficient and attainable.

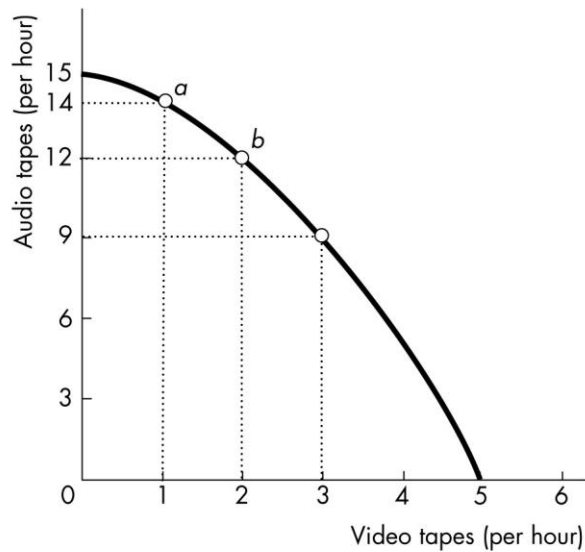
Answer: D

Topic: Study Guide Question, Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking





142) In the above figure, at point *a* what is the opportunity cost of producing one more audio tape?

- A) 1 video tape per audio tape
- B) 2 video tapes per audio tape
- C) 14 video tapes per audio tape
- D) There is no opportunity cost.

Answer: A

Topic: Study Guide Question, Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

143) In the above figure, at point *b* what is the opportunity cost of producing 2 more audio tapes?

- A) 1/2 video tape per audio tape
- B) 1 video tape per audio tape
- C) 6 video tapes per audio tape
- D) There is no opportunity cost.

Answer: A

Topic: Study Guide Question, Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

144) Production efficiency means that

- A) scarcity is no longer a problem.
- B) producing more of one good is possible only if the production of some other good is decreased.
- C) as few resources as possible are being used in production.
- D) producing another unit of the good has no opportunity cost.

Answer: B

Topic: Study Guide Question, Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

145) The existence of the tradeoff along the *PPF* means that the *PPF* is

- A) bowed outward.
- B) linear.
- C) negatively sloped.
- D) positively sloped.

Answer: C

Topic: Study Guide Question, Tradeoff

Skill: Conceptual

AACSB: Reflective thinking

146) The bowed-outward shape of a *PPF*

- A) is due to capital accumulation.
- B) reflects the unequal application of technology in production.
- C) illustrates the fact that no opportunity cost is incurred for increasing the production of the good measured on the horizontal axis but it is incurred to increase production of the good measured along the vertical axis.
- D) is due to the existence of increasing opportunity cost.

Answer: D

Topic: Study Guide Question, Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

147) Moving along a bowed-out *PPF* between milk and cotton, as more milk is produced the marginal cost of an additional gallon of milk

- A) rises.
- B) does not change.
- C) falls.
- D) probably changes, but in an ambiguous direction.

Answer: A

Topic: Study Guide Question, Increasing Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

148) A nation can *produce* at a point outside its *PPF*

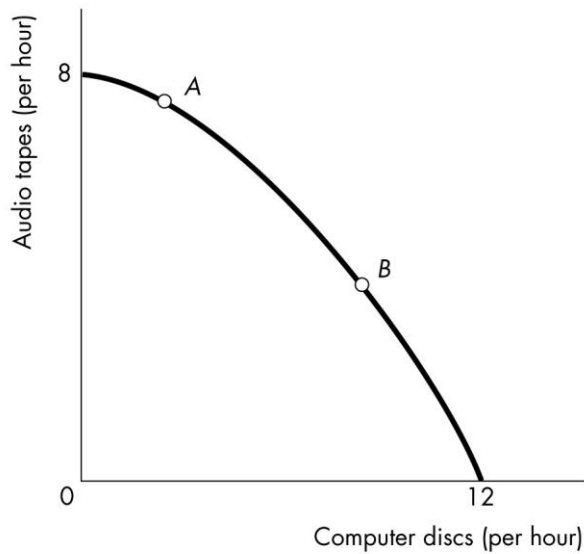
- A) when it trades with other nations.
- B) when it produces inefficiently.
- C) when its *PPF* is bowed out.
- D) never.

Answer: D

Topic: Study Guide Question, Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking



149) In the above figure, point A is \_\_\_\_\_, and point B is \_\_\_\_\_.

- A) attainable, attainable
- B) attainable, unattainable
- C) unattainable, attainable
- D) unattainable, unattainable

Answer: A

Topic: Parallel MyEconLab Questions, Production Possibilities Frontier

Skill: Analytical

AACSB: Reflective thinking

150) Abe can catch 15 pounds of fish an hour or pick 30 pounds of fruit an hour. He works an 8-hour day, spending 5 hours picking fruit and 3 hours catching fish. Calculate Abe's opportunity cost of a pound of fruit.

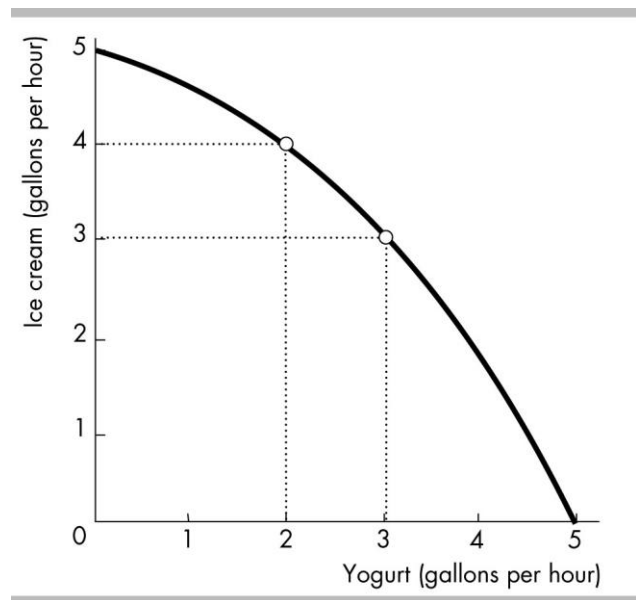
- A) 6 minutes
- B) 3 hours a day
- C) 2 pounds of fish
- D) 0.5 pounds of fish

Answer: D

Topic: Parallel MyEconLab Questions, Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking



151) In the figure above, if the quantity of yogurt produced increases from 2 gallons an hour to 3 gallons an hour, the opportunity cost of a gallon of yogurt in terms of ice cream is

- A) half a gallon.
- B) 1 gallon.
- C) 3 gallons.
- D) 4 gallons.

Answer: B

Topic: Parallel MyEconLab Questions, Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

152) Claire and Dag are farmers who produce beef and corn. In a year, Claire can produce 16 tons of beef or 40 bushels of corn, while Dag can produce 5 tons of beef or 25 bushels of corn. The opportunity cost of producing a ton of beef is

- A) 10 bushels of corn for Dag and 8 bushels of corn for Claire.
- B) 5 bushels of corn for Dag and 2.5 bushels of corn for Claire.
- C) 20 bushels of corn for Dag and 50 bushels of corn for Claire.
- D) 36.5 days for Dag and 45.6 days for Claire.

Answer: B

Topic: Parallel MyEconLab Questions, Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

153) Abe can catch 10 pounds of fish an hour or pick 10 pounds of fruit. Zeb can catch 30 pounds of fish an hour or pick 20 pounds of fruit. The opportunity cost of fish is \_\_\_\_\_ for Abe than for Zeb, and the opportunity cost of fruit is \_\_\_\_\_ for Abe than for Zeb.

- A) higher, lower
- B) lower, higher
- C) higher, higher
- D) lower, lower

Answer: A

Topic: Parallel MyEconLab Questions, Opportunity Cost

Skill: Analytical

AACSB: Reflective thinking

## 2 Using Resources Efficiently

1) Marginal cost is the opportunity cost

- A) that your activity imposes on someone else.
- B) that arises from producing one more unit of a good or service.
- C) of a good or service that exceeds its benefit.
- D) of a good or service divided by the number of units produced.

Answer: B

Topic: Marginal Cost

Skill: Recognition

AACSB: Reflective thinking

2) Marginal cost is the \_\_\_\_\_ one more unit of a good and \_\_\_\_\_ of the good increases.

- A) opportunity cost of producing; increases as production
- B) opportunity cost of producing; decreases as production
- C) price that must be paid to consume; increases as consumption
- D) price that must be paid to consume; decreases as consumption

Answer: A

Topic: Marginal Cost

Skill: Recognition

AACSB: Reflective thinking

- 3) Moving along a *PPF*, marginal cost is
- A) the cost of producing the first unit of a good or service.
  - B) the total cost, less the production of the other good or service.
  - C) greater than the opportunity cost.
  - D) equal to the opportunity cost of producing one more unit of a good or service.

Answer: D

Topic: Marginal Cost

Skill: Recognition

AACSB: Reflective thinking

- 4) The quantity of shoes produced is measured along the horizontal axis of a *PPF* and the quantity of shirts is measured along the vertical axis. As you move down toward the right along the *PPF*, the marginal cost of
- A) shoes decreases.
  - B) shoes increases.
  - C) shirts increases.
  - D) shoes and shirts is equal at the midpoint between the vertical and horizontal axis.

Answer: B

Topic: Opportunity Cost and Marginal Cost

Skill: Conceptual

AACSB: Analytical thinking

- 5) Marginal cost
- A) increases as more is produced.
  - B) remains constant as more is produced.
  - C) decreases as more is produced.
  - D) decreases as marginal benefits decrease.

Answer: A

Topic: Marginal Cost

Skill: Conceptual

AACSB: Reflective thinking

- 6) When the opportunity cost of producing more of a good is increasing, the marginal cost of producing more of the good is
- A) decreasing.
  - B) constant.
  - C) increasing.
  - D) More information is needed to answer the question.

Answer: C

Topic: Marginal Cost

Skill: Conceptual

AACSB: Reflective thinking

- 7) A marginal cost curve  
 A) is upward sloping.  
 B) shows that as more of a good is produced, opportunity costs of producing another unit increase.  
 C) is bowed inward so that its slope can become negative.  
 D) Both answers A and B are correct.

Answer: D

Topic: Marginal Cost

Skill: Conceptual

AACSB: Reflective thinking

Quantity of beans (bushels)	Quantity of carrots (bushels)
5	0
4	5
8	9
2	12
1	14
0	15

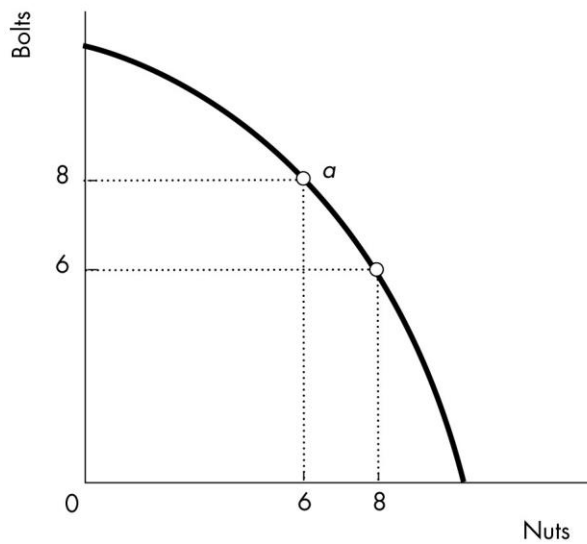
- 8) The table above represents different points along a production possibilities curve. What is the marginal cost of moving from 2 bushels to 3 bushels of beans?  
 A) 9 bushels of carrots per bushel of beans  
 B) 12 bushels of carrots per bushel of beans  
 C) 3 bushels of carrots per bushel of beans  
 D) 21 bushels of carrots per bushel of beans

Answer: C

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking



9) Victor currently produces nuts and bolts at point *a* in the figure. Victor's marginal cost of producing an additional nut is \_\_\_\_\_.

- A) 1 bolt per nut
- B) 1/2 bolt per nut
- C) 8/6 bolts per nut
- D) 8 bolts per nut

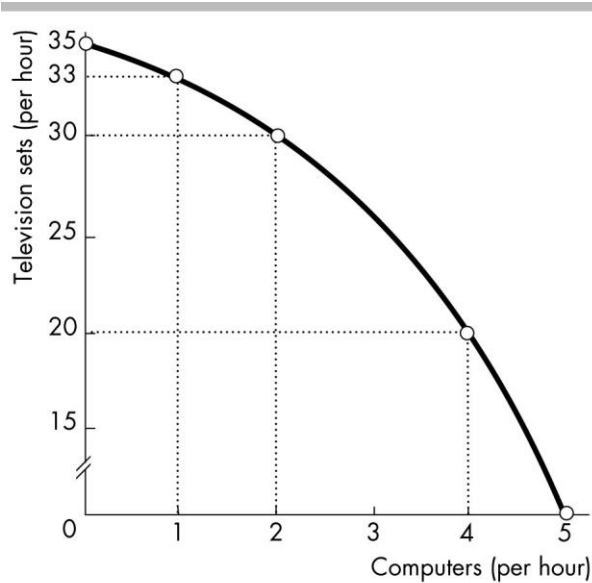
Answer: A

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking





- 10) In the figure above, the marginal cost of producing a computer
- A) increases as more computers are produced.
  - B) stays the same as more computers are produced.
  - C) decreases as more computers are produced.
  - D) is the same as the marginal cost of producing a television set.

Answer: A

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking

- 11) In the figure above, the marginal cost of the second computer is
- A) 2 television sets per computer.
  - B) 3 television sets per computer.
  - C) 5 television sets per computer.
  - D) 30 television sets per computer.

Answer: B

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking

- 12) In the figure above, the marginal cost of the fifth computer is
- A) 0 television sets per computer.
  - B) 4 television sets per computer.
  - C) 20 television sets per computer.
  - D) 35 television sets per computer.

Answer: C

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking

13) Marginal cost curves slope

- A) upward because of increasing opportunity cost.
- B) upward because of decreasing opportunity cost.
- C) downward because of increasing opportunity cost.
- D) downward because of decreasing opportunity cost.

Answer: A

Topic: Marginal Cost

Skill: Recognition

AACSB: Reflective thinking

14) Marginal benefit is the benefit

- A) that your activity provides to someone else.
- B) of producing a good or service when the total benefit from the good or service exceeds its total cost.
- C) that is received from consuming one more unit of a good or service.
- D) of consuming another good or service divided by the total number of goods or services produced.

Answer: C

Topic: Marginal Benefit

Skill: Recognition

AACSB: Reflective thinking

15) Marginal benefit is the

- A) benefit that a person receives from consuming one more unit of a good or service.
- B) amount of one good or service that a person gains when another good or service is consumed.
- C) minimum amount a person is willing to pay for one more unit of a good or service.
- D) dollars sacrificed to purchase a good or service.

Answer: A

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

16) The marginal benefit from a good is the amount a person is willing to pay for

- A) all of the good the person consumes.
- B) one more unit of the good.
- C) all of the units of the good the person consumes divided by the number of units he or she purchases.
- D) one more unit of the good divided by the number of units purchased.

Answer: B

Topic: Marginal Benefit

Skill: Recognition

AACSB: Reflective thinking

17) We measure the marginal \_\_\_\_\_ of a good by what a \_\_\_\_\_ for another unit of the good.

- A) benefit; person must pay
- B) cost; person is willing to pay
- C) benefit; person is willing to pay
- D) cost; person's preferences are

Answer: C

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

18) The marginal benefit of a good or service

- A) increases as more is consumed.
- B) decreases as more is consumed
- C) remains constant as more is consumed.
- D) decreases as less is consumed

Answer: B

Topic: Marginal Benefit

Skill: Recognition

AACSB: Reflective thinking

19) The principle of decreasing marginal benefit means that as the quantity of a good consumed

- A) decreases, its marginal benefit decreases.
- B) increases, its marginal benefit decreases.
- C) increases, its total benefit decreases.
- D) None of the above answers is correct.

Answer: B

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

20) As a person consumes more of a good, the

- A) marginal benefit increases.
- B) marginal benefit decreases.
- C) marginal benefit increases or decreases depending whether or not the economy is on the *PPF*.
- D) price of the good falls.

Answer: B

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

- 21) The principle of decreasing marginal benefit implies that the
- A) additional benefit from obtaining one more of a good or service decreases as more is consumed.
  - B) additional benefit from obtaining one more of a good or service increases as more is consumed.
  - C) total benefit from obtaining more of a good or service decreases as more is consumed.
  - D) total benefit from obtaining more of a good or service remains the same as more is consumed.

Answer: A

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

22) Which of the following is TRUE regarding marginal benefit?

- I) The marginal benefit curve shows the benefit firms receive by producing another unit of a good.
  - II) Marginal benefit increases as more of a good is consumed.
- A) I and II
  - B) I only
  - C) II only
  - D) neither I nor II

Answer: D

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

23) Susan likes to drink sodas. The \_\_\_\_\_ soda Susan drinks, the \_\_\_\_\_ of the last soda.

- A) more; higher the marginal benefit
- B) less; higher the opportunity cost
- C) less; lower the marginal benefit
- D) more; lower the marginal benefit

Answer: D

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

24) Marginal benefit is the benefit \_\_\_\_\_ one more unit of the good and \_\_\_\_\_ of the good increases.

- A) of producing; increases as production
- B) of producing; decreases as production
- C) from consuming; increases as consumption
- D) from consuming; decreases as consumption

Answer: D

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

25) A marginal benefit curve shows

- A) the efficient use of resources.
- B) the quantity of one good that must be forgone to get more of another good.
- C) the quantity of one good that people are willing to forgo to get another unit of another good.
- D) there are increasing opportunity costs.

Answer: C

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

26) Marginal benefit curves slope

- A) upward because of increasing opportunity cost.
- B) upward, but not because of increasing opportunity cost.
- C) downward because of increasing opportunity cost.
- D) downward, but not because of increasing opportunity cost.

Answer: D

Topic: Marginal Benefit

Skill: Conceptual

AACSB: Reflective thinking

27) Marginal benefit curves slope \_\_\_\_\_ and marginal cost curves slope \_\_\_\_\_.

- A) upward; upward
- B) upward; downward
- C) downward; downward
- D) downward; upward

Answer: D

Topic: Marginal Benefit

Skill: Recognition

AACSB: Reflective thinking

28) Suppose that the government is trying to decide between allocating its resources to build more dams or to build more freeways. In terms of forgone dams, as more freeways are constructed, the marginal benefit of additional freeways \_\_\_\_\_ and the marginal cost of additional freeways \_\_\_\_\_.

- A) increases; increases
- B) increases; decreases
- C) decreases; increases
- D) decreases; decreases

Answer: C

Topic: Marginal Benefit and Marginal Cost

Skill: Conceptual

AACSB: Analytical thinking

Television sets (millions per year)	Willingness to pay (computers per television set)
1	2.5
2	2.0
3	1.5
4	1.0
5	0.5

29) In the table above, the marginal benefit of the 4 millionth television set is

- A) negative 0.5 computers per television set.
- B) 0.25 computers per television set.
- C) 0.5 computers per television set.
- D) 1.0 computer per television set.

Answer: D

Topic: Marginal Benefit

Skill: Analytical

AACSB: Analytical thinking

30) Resource use is allocatively efficient when

- A) we produce the goods with the highest opportunity cost.
- B) we produce the goods with the lowest opportunity cost.
- C) we cannot produce more goods and services.
- D) we produce the amount of the different goods we value most highly.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication

31) When we cannot produce more of any good without giving up some other good that we value more highly, we have achieved

- A) production.
- B) equity.
- C) allocative efficiency.
- D) the production point where the marginal benefit exceeds the marginal cost by as much as possible.

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication

32) If the marginal benefit of a good exceeds its marginal cost

- A) we've achieved efficient resource use.
- B) we should produce more to achieve the allocatively efficient use of resources.
- C) we should produce less to achieve the allocatively efficient use of resources.
- D) we cannot tell if more or less should be produced to achieve the allocatively efficient use of resources.

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Conceptual

AACSB: Written and oral communication

33) When an economy produces at its allocatively efficient production point

- A) scarcity is not a problem.
- B) resources are not limited.
- C) a society can increase the production of all goods.
- D) a society can increase the production of one good only by decreasing the production of some other good that is valued more highly.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication

34) Allocative efficiency occurs when

- A) we cannot produce more of any good without giving up some other good that we value more highly.
- B) we cannot produce more of any one good without giving up some other good.
- C) marginal benefit exceeds marginal cost.
- D) opportunity costs are decreasing.

Answer: A

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Written and oral communication

35) Allocative efficiency occurs when it is

- A) possible to produce more of one good without giving up the production of some other good.
- B) possible to produce more of all goods.
- C) not possible to produce more of one good without giving up the production of some other good that is valued less highly.
- D) not possible to produce more of one good without giving up the production of some other good that is valued more highly.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Conceptual

AACSB: Reflective thinking

36) An efficient allocation of resources occurs when we

- A) produce the goods and services that people need.
- B) cannot produce more of a good or service without giving up some other good or service that we value more highly.
- C) produce the goods and services that people want.
- D) cannot produce more of a good or service without giving up some other good or service that we need.

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Conceptual

AACSB: Reflective thinking

37) Which of the following statements can used to describe efficiency?

- I. Efficiently using resources means that producers make the highest profits possible.
  - II. Using resources efficiently means that we cannot produce more of one good without producing less of another good that has a higher value.
  - III. Resource use is efficient when we produce goods and services that people value most highly.
- A) I only
  - B) I and II
  - C) II and III
  - D) I, II and III

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Conceptual

AACSB: Reflective thinking

38) Resource use is allocatively efficient when marginal benefit is

- A) greater than marginal cost.
- B) equal to marginal cost.
- C) less than marginal cost.
- D) at its maximum value.

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication

39) Resource use is allocatively efficient

- A) when marginal benefit equals marginal cost.
- B) whenever marginal benefit exceeds marginal cost.
- C) whenever marginal cost exceeds marginal benefit.
- D) when the maximum possible quantity is being produced.

Answer: A

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication



- 40) Resource use is allocatively efficient if the
- A) total cost of what the resource produces is less than the total benefit of what is produced.
  - B) total cost of what the resource produces is equal to the total benefit of what is produced.
  - C) marginal benefit of what the resource produces has diminished to zero.
  - D) marginal cost of what the resource produces is equal to the marginal benefit of what is produced.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication

- 41) A country produces only pencils and erasers. Pencil production is allocatively efficient if the marginal \_\_\_\_\_ of a pencil equals the marginal \_\_\_\_\_ of \_\_\_\_\_.

- A) cost; benefit; an eraser
- B) cost; cost; an eraser
- C) benefit; benefit; an eraser
- D) benefit; cost; a pencil

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Recognition

AACSB: Written and oral communication

- 42) If the marginal benefit of consuming another unit of a good is positive, then to reach the allocatively efficient level of output more of the good should be produced and consumed

- A) no matter what.
- B) as long as the consumer can afford to pay for it.
- C) if the total benefit of the good is greater than its total cost.
- D) if the marginal benefit of the good is greater than its marginal cost.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Conceptual

AACSB: Written and oral communication

Quantity (pizzas per day)	Marginal benefit (cans per day)	Marginal cost (cans per day)
10	26	14
20	24	16
30	22	18
40	20	20
50	18	22
60	16	24
70	14	26

43) The table above shows the marginal benefit from pizza and the marginal cost of pizza in cans of soda forgone. If \_\_\_\_\_ pizzas are produced, the quantity of soda that people are willing to give up to get an additional pizza is more than the quantity of soda that they must give up to get that additional pizza.

- A) any quantity other than 40
- B) 40
- C) more than 40
- D) fewer than 40

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

44) The table above shows the marginal benefit from pizza and the marginal cost of pizza in cans of soda forgone. The allocatively efficient quantity of pizza is \_\_\_\_\_ pizzas per day.

- A) 70
- B) 10
- C) more than 70
- D) 40

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

Camel rides (per day)	Marginal benefit (tubes of sunscreen)	Marginal cost (tubes of sunscreen)
1	20	11
2	18	12
3	16	13
4	14	14
5	12	15
6	10	16

45) Leisure Land produces only sun screen and camel rides. The table shows the marginal benefit and marginal cost schedules for sun screen and camel rides. The allocatively efficient number of camel rides is \_\_\_\_\_.

- A) 1 ride per day because the marginal benefit exceeds the marginal cost by as much as possible
- B) 2 rides per day
- C) 4 rides per day
- D) 6 rides per day because that is the maximum number of rides

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

Quantity of pizza	Marginal benefit	Marginal cost
5	25	11
6	20	13
7	15	15
8	10	17

46) The table above represents the marginal cost and marginal benefit associated with pizza (in terms of movies). What quantity of pizza should be produced if resources are to be used efficiently?

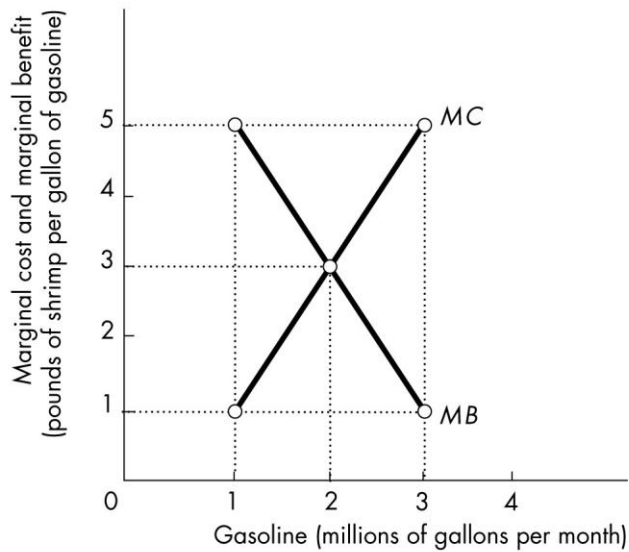
- A) 5 pizzas
- B) 6 pizzas
- C) 7 pizzas
- D) 8 pizzas

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking



47) According to the diagram in the above figure, what is the marginal benefit of consuming the 3 millionth gallon of gasoline per month?

- A) 5 pounds of shrimp per gallon of gasoline
- B) 3 pounds of shrimp per gallon of gasoline
- C) 2 pounds of shrimp per gallon of gasoline
- D) 1 pound of shrimp per gallon of gasoline

Answer: D

Topic: Marginal Benefit

Skill: Analytical

AACSB: Analytical thinking

48) According to the diagram in the figure above, what is the marginal cost of producing the 3 millionth gallon of gasoline per month?

- A) 5 pounds of shrimp per gallon of gasoline
- B) 4 pounds of shrimp per gallon of gasoline
- C) 3 pounds of shrimp per gallon of gasoline
- D) 1 pound of shrimp per gallon of gasoline

Answer: A

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking

49) According to the diagram in the figure above, an allocatively efficient use of resources requires that production and consumption of gasoline be

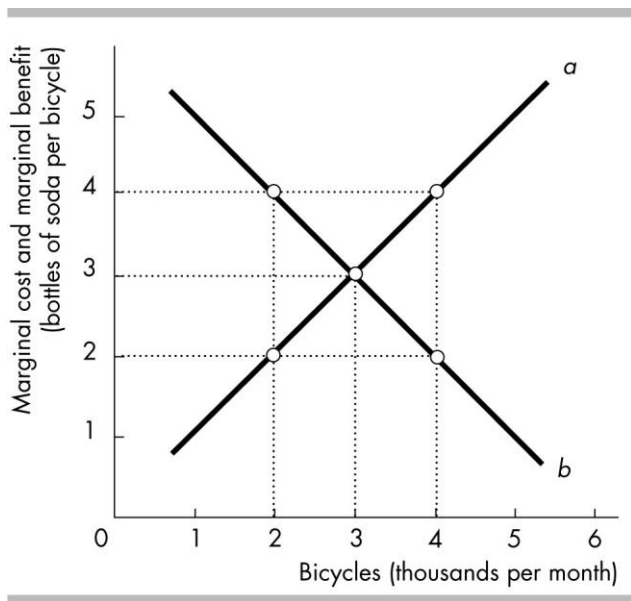
- A) 1 million gallons of gasoline per month.
- B) 2 million gallons of gasoline per month.
- C) 3 million gallons of gasoline per month.
- D) 4 million gallons of gasoline per month.

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking



50) In the above figure, the curve labeled *a* is the \_\_\_\_\_ curve and the curve labeled *b* is the \_\_\_\_\_ curve.

- A) marginal cost; marginal benefit
- B) marginal cost; trade line
- C) marginal benefit; trade line
- D) production possibilities frontier; trade line

Answer: A

Topic: Marginal Benefit and Marginal Cost

Skill: Analytical

AACSB: Analytical thinking

51) In the above figure, curve *b* shows the

- A) bottles of soda that people are *willing* to forgo to get another bicycle.
- B) bottles of soda that people *must* forgo to get another bicycle.
- C) benefits of producing more bicycles is greater than the benefits of producing more soda.
- D) benefits of producing more soda is greater than the benefits of producing more bicycles.

Answer: A

Topic: Marginal Benefit

Skill: Analytical

AACSB: Analytical thinking

52) In the above figure, when 2000 bicycles are produced each month, we can see that

- A) the marginal benefit from another bicycle is greater than the marginal cost of another bicycle.
- B) more bicycles should be produced to reach the allocatively efficient level of output.
- C) the economy is very efficient at the production of bicycles because the marginal benefit exceeds the marginal cost.
- D) Both answers A and B are correct.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

53) In the above figure, if 4000 bicycles are produced per month,

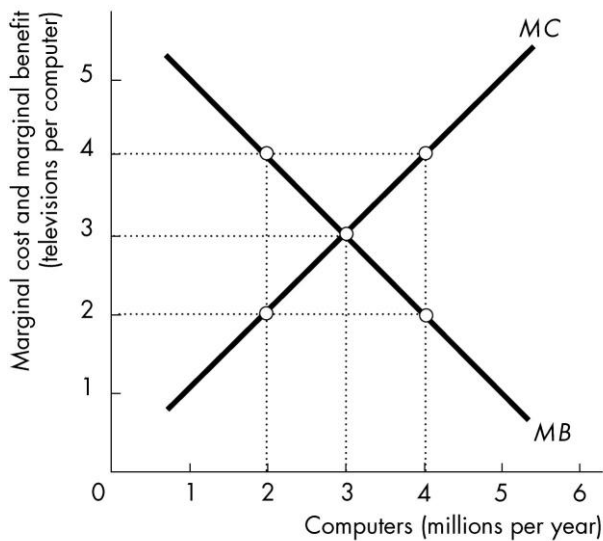
- A) marginal benefit is greater than marginal cost.
- B) fewer bicycles should be produced to reach the allocatively efficient level of output.
- C) the marginal cost of production is 2 bottles of soda per bicycle.
- D) Both answers A and B are correct.

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking



54) In the above figure, if 2 million computers are produced per year then the \_\_\_\_\_ should be produced to achieve the allocatively efficient use of resources.

- A) marginal cost of a computer exceeds the marginal benefit of a computer, so more computers
- B) marginal cost of a computer exceeds the marginal benefit of a computer, so fewer computers
- C) marginal benefit of a computer exceeds the marginal cost of a computer, so more computers
- D) marginal benefit of a computer exceeds the marginal cost of a computer, so fewer computers

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

55) In the figure above, if 4 million computers are produced per year then the \_\_\_\_\_ should be produced to achieve the allocatively efficient use of resources.

- A) marginal cost of a computer exceeds the marginal benefit of a computer, so more computers
- B) marginal cost of a computer exceeds the marginal benefit of a computer, so fewer computers
- C) marginal benefit of a computer exceeds the marginal cost of a computer, so more computers
- D) marginal benefit of a computer exceeds the marginal cost of a computer, so fewer computers

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

56) In the figure above, the allocatively efficient output of computers is

- A) 2 million per year.
- B) 3 million per year.
- C) 4 million per year.
- D) the largest amount possible.

Answer: B

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

57) In the figure above, at the allocatively efficient level of computer production consumers are willing to give up

- A) 0 televisions per computer.
- B) between 0 and 3 televisions per computer.
- C) 3 televisions per computer.
- D) more than 3 televisions per computer.

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

58) In the figure above, at the allocatively efficient level of computer production the marginal cost of producing a computer is

- A) 0 televisions per computer.
- B) between 0 and 3 televisions per computer.
- C) 3 televisions per computer.
- D) more than 3 televisions per computer.

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

59) The most anyone is willing to pay for another purse is \$30. Currently the price of a purse is \$40, and the cost of producing another purse is \$50. The marginal benefit of a purse is

- A) \$50.
- B) \$40.
- C) \$30.
- D) an amount not given in the answers above.

Answer: C

Topic: Study Guide Question, Marginal Benefit

Skill: Analytical

AACSB: Analytical thinking

60) If the marginal benefit from another computer exceeds the marginal cost of the computer, then to use resources allocatively efficiently

- A) more resources should be used to produce computers.
- B) fewer resources should be used to produce computers.
- C) if the marginal benefit exceeds the marginal cost by as much as possible, the efficient amount of resources are being used to produce computers.
- D) None of the above is correct because marginal benefit and marginal cost have nothing to do with using resources allocatively efficiently.

Answer: A

Topic: Study Guide Question, Efficient Use of Resources

Skill: Analytical

AACSB: Reflective thinking



### 3 Economic Growth

- 1) An expansion of the production possibilities frontier is
- A) called economic growth.
  - B) proof that scarcity is not a binding constraint.
  - C) a free gift of nature.
  - D) something that has occurred only rarely in history.

Answer: A

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

- 2) Economic growth can be represented by
- A) a movement down the production possibilities frontier (*PPF*).
  - B) a movement up the production possibilities frontier (*PPF*).
  - C) an inward shift of the production possibilities frontier (*PPF*).
  - D) an outward shift of the production possibilities frontier (*PPF*).

Answer: D

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

- 3) When economic growth occurs, the
- A) economy moves along its production possibilities frontier.
  - B) production possibilities frontier shifts outward.
  - C) production possibilities frontier becomes steeper.
  - D) production possibilities frontier shifts outward but no longer limits the amount that can be produced.

Answer: B

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

- 4) After Hurricane Katrina devastated parts of Mississippi and New Orleans in 2005, we can be sure that the production possibilities frontier for that area temporarily
- A) shifted inward, toward the origin.
  - B) shifted outward, away from the origin.
  - C) became flatter.
  - D) became steeper.

Answer: A

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

5) Economic growth is the result of all of the following EXCEPT

- A) technological change.
- B) capital accumulation.
- C) opportunity cost.
- D) investment in human capital.

Answer: C

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

6) A key factor that leads to economic growth is

- A) human capital accumulation.
- B) increasing current consumption.
- C) avoiding the opportunity cost of investment.
- D) Both answers A and B are correct.

Answer: A

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

7) Technological progress makes the production possibilities frontier

- A) shift inward toward the origin.
- B) become more linear and less bowed.
- C) shift outward from the origin.
- D) become less linear and more bowed.

Answer: C

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

8) Economic growth is shown on the production possibilities frontier as

- A) a movement from one point on the *PPF* to another.
- B) an outward shift in the *PPF*.
- C) an inward shift in the *PPF*.
- D) the curvature of the *PPF*.

Answer: B

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

- 9) Economic growth can be pictured in a production possibilities frontier diagram by
- A) making the production possibilities frontier more bowed out.
  - B) making the production possibilities frontier less bowed out.
  - C) shifting the production possibilities frontier outward.
  - D) shifting the production possibilities frontier inward.

Answer: C

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

- 10) Using a production possibilities frontier, economic growth is illustrated by a
- A) point inside the curve.
  - B) point on the curve.
  - C) movement from one point on the curve to another point on the curve.
  - D) rightward shift of the curve.

Answer: D

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

- 11) Capital accumulation definitely
- A) has no impact on the production possibilities frontier.
  - B) shifts the production possibilities frontier inward.
  - C) makes the production possibilities frontier steeper.
  - D) shifts the production possibilities frontier outward.

Answer: D

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

- 12) President Obama has proposed a goal that everyone complete at least one year of formal education or training beyond high school. This policy would
- A) increase human capital and increase economic growth.
  - B) increase physical capital and increase economic growth.
  - C) increase financial capital and increase economic growth.
  - D) eliminate opportunity costs and increase economic growth.

Answer: A

Topic: Production Possibilities

Skill: Analytical

AACSB: Analytical thinking

13) Economic growth comes from \_\_\_\_\_.

- A) people willing to increase their skills in which case, economic growth is free
- B) producing more goods than people want to consume
- C) capital accumulation and the avoidance of opportunity cost
- D) capital accumulation and technological advance

Answer: D

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

14) The production possibilities frontier shifts as

- A) tastes and preferences change.
- B) the money supply grows or shrinks.
- C) technology changes.
- D) the unemployment rate changes.

Answer: C

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

15) Technological change

- A) generates economic growth.
- B) shifts the *PPF* leftward.
- C) creates inefficiency.
- D) Both answers A and C are correct.

Answer: A

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

16) As an economy's capital stock increases, the economy

- A) generally experiences increased unemployment of other resources, such as labor.
- B) generally decides to engage in international trade.
- C) experiences economic growth.
- D) gains an absolute advantage in the production of capital goods.

Answer: C

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

- 17) An increase in the production of capital goods
- A) must increase the current production of consumer goods.
  - B) must decrease the future production of consumer goods.
  - C) shifts the production possibilities frontier inward in the future.
  - D) shifts the production possibilities frontier outward in the future.

Answer: D

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

18) Suppose a scientific breakthrough made free solar power available in unlimited quantities in the United States. The effect of this invention would be to move the

- A) United States beyond its production possibilities frontier.
- B) United States inside its production possibilities frontier.
- C) U.S. production possibilities frontier outward.
- D) U.S. production possibilities frontier inward.

Answer: C

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

19) In March a factory used new technology to produce its output. Then in August a fire destroys half the factory. The new technology shifted the factory's *PPF* \_\_\_\_\_ and the fire shifted it \_\_\_\_\_.

- A) inward; outward
- B) outward; inward
- C) outward; outward
- D) inward; inward

Answer: B

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

20) Suppose the United States discovers a way to produce clean nuclear fuel. The effect of this discovery would be to

- A) lead the United States to produce less nuclear fuel.
- B) force the United States to produce at a point inside its *PPF*.
- C) shift the U.S. *PPF* outward.
- D) shift the U.S. *PPF* inward.

Answer: C

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

21) Consider a production possibilities frontier with corn on the vertical axis and cars on the horizontal. Unusually good weather for growing corn shifts

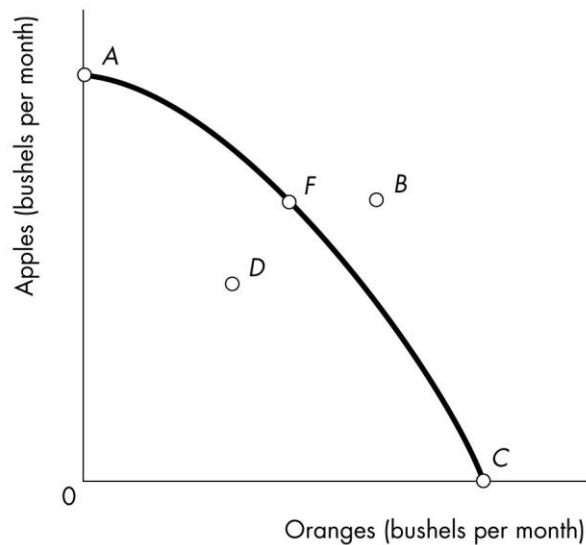
- A) the horizontal intercept rightward and the vertical intercept upward.
- B) the horizontal intercept rightward but does not shift the vertical intercept.
- C) the vertical intercept upward but does not shift the horizontal intercept.
- D) neither the horizontal intercept nor the vertical intercept.

Answer: C

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking



22) In the figure above, how can the economy represented by the production possibilities frontier move from point C to point F?

- A) Increase the available amount of resources.
- B) Increase the level of technology.
- C) Redistribute the existing resources to produce more apples and fewer oranges.
- D) First move to point B and then move to point F.

Answer: C

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Analytical thinking

- 23) In the figure above, a point showing an inefficient production point is point
- A) A.
  - B) B.
  - C) C.
  - D) D.

Answer: D

Topic: Production Efficiency

Skill: Analytical

AACSB: Analytical thinking

- 24) In the figure above, what can be said about point B?

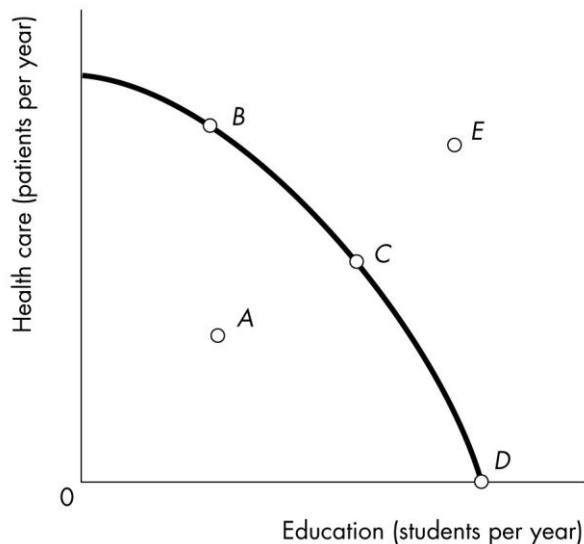
- A) It can be reached only after economic growth occurs.
- B) It can be attained only if some resources are left unused.
- C) It represents all resources being devoted to the production of apples.
- D) It represents all resources being devoted to the production of oranges.

Answer: A

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking



- 25) In the figure above, point D is

- A) less production efficient than point C.
- B) production efficient and point A is not production efficient.
- C) not production efficient and point B is production efficient.
- D) production efficient and point B is not production efficient.

Answer: B

Topic: Production Efficiency

Skill: Analytical

AACSB: Analytical thinking

26) In the figure above, point *A* is undesirable because

- A) there is an inefficient use of resources.
- B) too much health care is being produced.
- C) the opportunity costs of health care is too high.
- D) point *E* is a more realistic option in this economy.

Answer: A

Topic: Production Efficiency

Skill: Analytical

AACSB: Analytical thinking

27) In the figure above, the opportunity cost of moving from point *C* to point *D* is

- A) the loss in production in the health care sector.
- B) the increase in production in the education sector.
- C) zero.
- D) the loss in production in the education sector.

Answer: A

Topic: Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

28) In the figure above, point *E* could be obtained if

- A) resources were shifted from education to health care.
- B) resources were used more efficiently.
- C) society's resources increased.
- D) resources were shifted from health care to education.

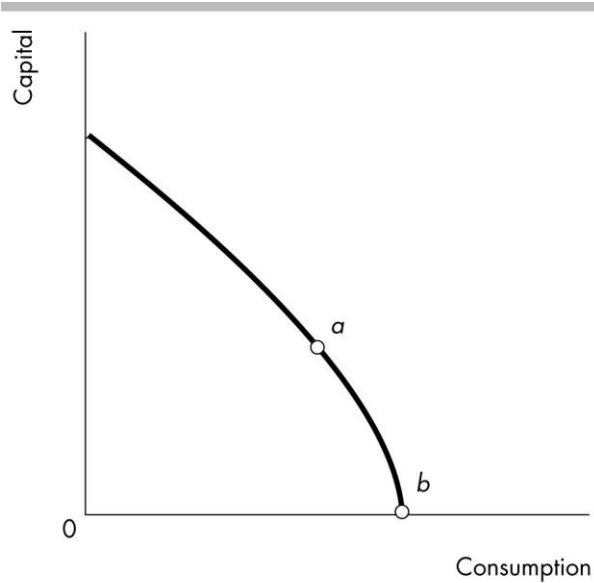
Answer: C

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking





29) Two countries, Alpha and Beta, have identical production possibilities frontiers illustrated above. If Alpha produces at point *a* and Beta produces at point *b*, then \_\_\_\_\_.

- A) Beta's economic growth rate will exceed Alpha's
- B) Alpha consumes less than Beta today, but it will grow faster than Beta
- C) Alpha's and Beta's economic growth rates will be the same
- D) Beta's future consumption will be greater than Alpha's

Answer: B

Topic: Economic Growth

Skill: Conceptual

AACSB: Analytical thinking



30) In the figure above, an economy would grow fastest if it produces at point

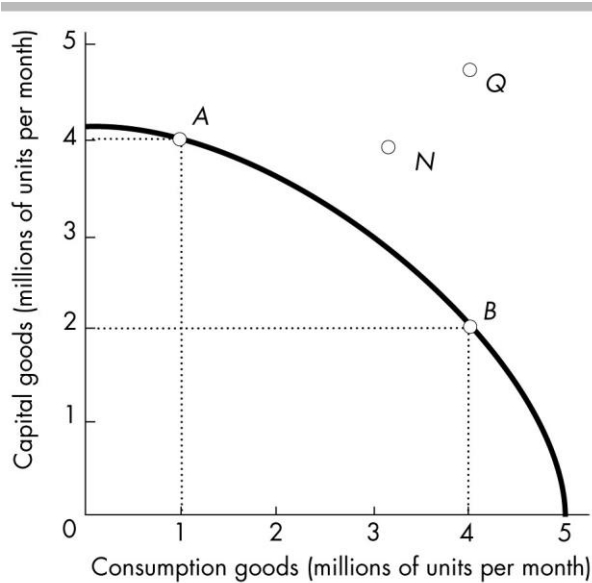
- A) A.
- B) B.
- C) C.
- D) D.

Answer: A

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking



31) In 2012, Country X and Country Y had the same production possibilities, illustrated in the figure above. Country X chose to produce at point A, while country Y chose to produce at point B. In 2018, most likely, Country X will be at point such as \_\_\_\_\_ while Country Y will be at point such as \_\_\_\_\_.

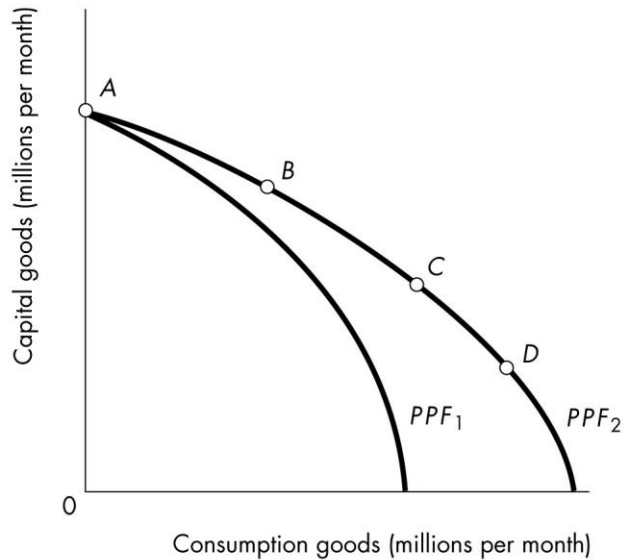
- A) A; B
- B) B; A
- C) N; Q
- D) Q; N

Answer: C

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking



32) In the above figure, in order for this country to move from production possibilities frontier  $PPF_1$  to  $PPF_2$ , it might

- A) increase the skills and productivity of its work force.
- B) put all unemployed resources to work producing desired output.
- C) engage in exchange with other nations.
- D) increase the average level of prices for all goods produced and consumed.

Answer: A

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking

33) In the above figure, once on  $PPF_2$ , a country would grow slowest by producing at point

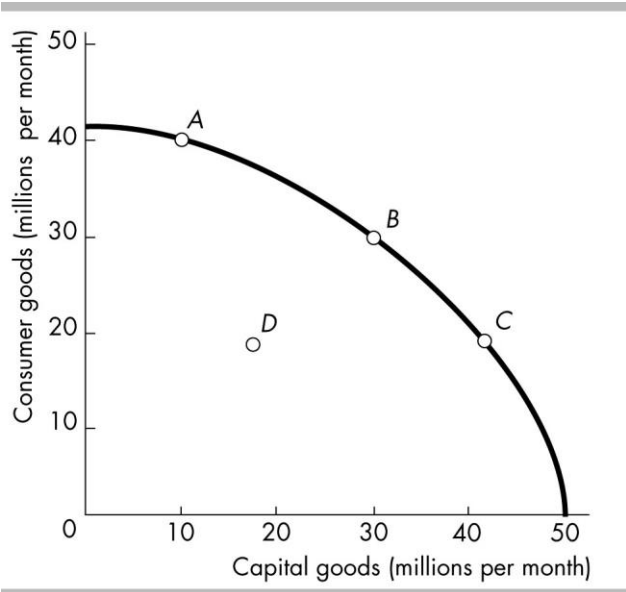
- A) A.
- B) B.
- C) C.
- D) D.

Answer: D

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking



34) The figure above shows the production possibilities frontiers for four nations that have identical production possibilities frontiers in the present. The one that will grow most rapidly in the future is most likely to be producing at point

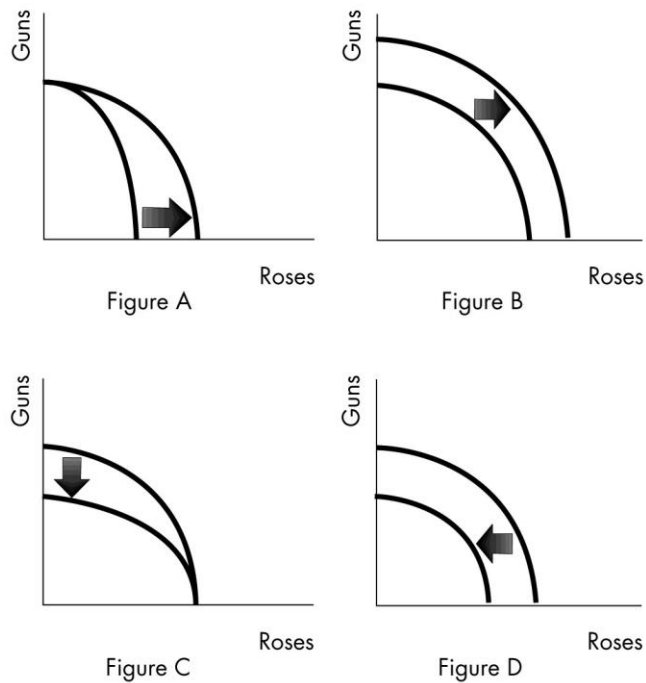
- A) A.
- B) B.
- C) C.
- D) D.

Answer: C

Topic: Economic Growth Rate

Skill: Analytical

AACSB: Analytical thinking



35) Based on the above, which figure shows the impact of a decrease in the population available to work?

- A) Figure A
- B) Figure B
- C) Figure C
- D) Figure D

Answer: D

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking

36) Which graph shows the impact of scientists developing a more powerful fertilizer?

- A) Figure A
- B) Figure B
- C) Figure C
- D) Figure D

Answer: A

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking

37) Economic growth

- A) leads to less consumption in the present and increased consumption in the future.
- B) is free.
- C) is the major reason we face scarcity.
- D) allows us to increase our consumption in the present and in the future.

Answer: A

Topic: The Cost of Economic Growth

Skill: Conceptual

AACSB: Written and oral communication

38) The opportunity cost of more capital goods today is

- A) fewer capital goods in the future.
- B) fewer consumer goods in the future.
- C) fewer consumer goods today.
- D) more unemployed resources in the future.

Answer: C

Topic: The Cost of Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

39) The opportunity cost of economic growth is

- A) future consumption that a nation gets if it gives up some present consumption.
- B) future consumption that a nation gives up to consume more today.
- C) present consumption that a nation gives up to accumulate capital.
- D) present investment that a nation gives up to increase its economic growth.

Answer: C

Topic: The Cost of Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

40) An opportunity cost of economic growth is

- A) essentially zero because economic growth leads to such large gains in the long run.
- B) the decrease in production of consumption goods in the present time period.
- C) decreased by the creation of capital goods rather than consumption goods.
- D) so high that places such as Hong Kong have had to do without it.

Answer: B

Topic: The Cost of Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

41) The tradeoff between current consumption and the production of capital goods also reflects a tradeoff between

- A) the future production of capital goods and future consumption of goods.
- B) economic growth and technological change.
- C) satisfying today the needs of the poor and the wants of the wealthy.
- D) current consumption and future consumption.

Answer: D

Topic: The Cost of Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

42) President Obama has proposed a goal that everyone complete at least one year of formal education or training beyond high school. This policy would \_\_\_\_\_ the production of current consumption goods and services and \_\_\_\_\_ the future production of consumption goods and services.

- A) decrease; increase
- B) increase; decrease
- C) not change; increase
- D) increase; increase

Answer: A

Topic: The Cost of Economic Growth

Skill: Analytical

AACSB: Analytical thinking

43) Economic growth

- A) creates unemployment.
- B) has no opportunity cost.
- C) shifts the *PPF* outward.
- D) makes it more difficult for a nation to produce on its *PPF*.

Answer: C

Topic: Study Guide Question, Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

44) The *PPF* shifts if

- A) the unemployment rate falls.
- B) people decide they want more of one good and less of another.
- C) the prices of the goods and services produced rise.
- D) the resources available to the nation change.

Answer: D

Topic: Study Guide Question, Economic Growth

Skill: Conceptual

AACSB: Reflective thinking



- 45) An increase in the nation's capital stock will
- A) shift the *PPF* outward.
  - B) cause a movement along the *PPF* upward and leftward.
  - C) cause a movement along the *PPF* downward and rightward.
  - D) move the nation from producing within the *PPF* to producing at a point closer to the *PPF*.

Answer: A

Topic: Study Guide Question, Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

- 46) One of the opportunity costs of economic growth is
- A) capital accumulation.
  - B) technological change.
  - C) reduced current consumption.
  - D) the gain in future consumption.

Answer: C

Topic: Study Guide Question, Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

- 47) In general, the more resources that are devoted to technological research, the
- A) greater is current consumption.
  - B) higher is the unemployment rate.
  - C) faster the *PPF* shifts outward.
  - D) more the *PPF* will bow outward.

Answer: C

Topic: Study Guide Question, Economic Growth

Skill: Conceptual

AACSB: Analytical thinking

- 48) An increase in the nation's capital stock will
- A) shift the *PPF* outward.
  - B) cause a movement along the *PPF* up and to the left.
  - C) cause a movement along the *PPF* down and to the right.
  - D) move the nation from producing within the *PPF* to producing at a point closer to the *PPF*.

Answer: A

Topic: Study Guide Question, Economic Growth

Skill: Analytical

AACSB: Analytical thinking

#### 4 Gains from Trade

1) Because of the existence of comparative advantage, the total output of goods is higher when each producer

- A) produces many different goods.
- B) produces at the midpoint of its *PPF*.
- C) specializes in the production of one good or a few goods.
- D) makes both intermediate and final goods.

Answer: C

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

2) A person has a comparative advantage in producing a particular good if that person

- A) has higher productivity in producing it than anyone else has.
- B) can produce it at lower opportunity cost than anyone else can.
- C) has less desire to consume that good than anyone else has.
- D) has more human capital related to that good than anyone else has.

Answer: B

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

3) Comparative advantage is

- A) the ability to perform an activity at a lower opportunity cost than anyone else.
- B) the ability to perform an activity at a higher opportunity cost than anyone else.
- C) the ability to perform an activity at a zero opportunity cost.
- D) another name for absolute advantage.

Answer: A

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

4) A person has a comparative advantage in an activity if that person can

- A) produce more goods in a given amount of time than another person.
- B) produce fewer goods in a given amount of time than another person.
- C) perform the activity at a lower opportunity cost than anyone else.
- D) perform that activity at a higher opportunity cost than anyone else.

Answer: C

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

- 5) A person has a comparative advantage in an activity whenever he or she
- A) has an absolute advantage in the activity.
  - B) can perform the activity at a lower opportunity cost than can anyone else.
  - C) can do the activity in less time than anyone else.
  - D) can do everything better than anyone else.

Answer: B

Topic: Comparative Advantage

Skill: Conceptual

AACSB: Reflective thinking

- 6) A country possesses a comparative advantage in the production of a good if
- A) the opportunity cost in terms of forgone output of alternative goods is lower for this country than it is for its trading partners.
  - B) it possesses an absolute advantage in the production of this good.
  - C) it is able to produce more of this good per hour than can any other country.
  - D) all of the above.

Answer: A

Topic: Comparative Advantage

Skill: Conceptual

AACSB: Reflective thinking

- 7) Individuals A and B both produce good X. A has a comparative advantage in the production of good X if A
- A) has a lower opportunity cost of producing good X than has B.
  - B) has a lower opportunity cost of producing good X than of producing good Y.
  - C) can produce more units of X in a given time period than can B.
  - D) can produce X using newer technology than can B.

Answer: A

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

- 8) Which of the following describes comparative advantage?
- A) To produce a bushel of wheat Farmer John must give up 2 bushels of corn whereas Farmer Ben must give up 3 bushels of corn.
  - B) Company A can produce 4 boxes of cereal in a day whereas Company B can produce 5 boxes of cereal in a day.
  - C) Firm A can produce a good at a cost of \$3 and Firm B can produce the good at a cost of \$4.
  - D) Jane can type 50 words per minute and Joe can type 60 words per minute.

Answer: A

Topic: Comparative Advantage

Skill: Conceptual

AACSB: Written and oral communication

9) In an eight-hour day, Andy can produce either 24 loaves of bread or 8 pounds of butter. In an eight-hour day, Bob can produce either 8 loaves of bread or 8 pounds of butter. Andy has a comparative advantage in the production of

- A) bread, while Bob has a comparative advantage in the production of butter.
- B) butter, while Bob has a comparative advantage in the production of bread.
- C) bread and neither has a comparative advantage in the production of butter.
- D) both bread and butter.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

10) The kitchen manager at an Italian restaurant is deciding what assignments he should give to his two cooks, John and David. John can make 25 pizzas or 40 servings of pasta per hour and David can make 20 pizzas or 30 servings of pasta. Which of the following should be the manager's choice?

- A) Fire David because he is not as productive as John. John will do both jobs.
- B) John will make pizza because he has comparative advantage in making pizza.
- C) David will make pizza because he has comparative advantage in making pizza.
- D) John and David both will spend half their time making pizza and half their time making pasta because each has a comparative advantage in making pizza.

Answer: C

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

11) An economy produces only food and shelter. There are two individuals in the economy: Bill and Mary. Mary's opportunity cost of producing 1 unit of shelter is 2 units of food. Bill's opportunity cost of producing 1 unit of shelter is 4 units of food.

- A) Bill has a comparative advantage over Mary in the production of shelter.
- B) Mary has a comparative advantage over Bill in the production of food.
- C) Mary has a comparative advantage over Bill in the production of shelter.
- D) Bill has an absolute advantage over Mary in the production of shelter.

Answer: C

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

12) Country A can produce 1 cello by giving up the production of 5 guitars. Country B can produce 1 guitar by giving up the production of 4 cellos. In which good does country A have a comparative advantage?

- A) guitars
- B) cellos
- C) both goods
- D) neither good

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

13) The opportunity cost of producing one ton of wheat for Country Gamma is 4 tons of corn. The opportunity cost of producing one ton of wheat for Country Beta is 8 tons of corn. Which country has the comparative advantage in the production of wheat?

- A) Gamma
- B) Beta
- C) Neither country has a comparative advantage.
- D) Both countries have the comparative advantage.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

14) Suppose that in an hour Joe can prepare 10 sandwiches or 5 pizzas. The opportunity cost of Joe producing one sandwich is

- A) 2 pizzas.
- B) 1/2 pizza.
- C) 5 pizzas.
- D) 1 pizza.

Answer: B

Topic: Comparative Advantage, Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

15) Suppose Joe can prepare 10 sandwiches or 5 pizzas in an hour and Beth can produce 12 sandwiches or 9 pizzas. Which of the following is TRUE?

- A) Beth should produce pizza because she has a higher opportunity cost of producing pizza than does Joe.
- B) Beth should produce pizza because she has a lower opportunity cost of producing pizza than does Joe.
- C) Joe should produce pizza because he has a higher opportunity cost of producing pizza than does Beth.
- D) Joe should produce pizza because he has a lower opportunity cost of producing pizza than does Beth.

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

16) Suppose Joe can prepare 20 sandwiches or 10 pizzas in an hour and Beth can produce 36 sandwiches or 27 pizzas. The concept of comparative advantage concludes that

- A) Beth should produce both goods because she can produce more of both goods in an hour than can Joe.
- B) Beth should produce sandwiches and Joe should produce pizza.
- C) Beth should produce pizza and Joe should produce sandwiches.
- D) Beth should produce both goods and Joe should produce sandwiches.

Answer: C

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

17) Tom takes 20 minutes to cook an egg and 5 minutes to make a sandwich. Jerry takes 15 minutes to cook an egg and 3 minutes to make a sandwich. Tom has a comparative advantage in \_\_\_\_\_ and Jerry has a comparative advantage in \_\_\_\_\_.

- A) cooking eggs; making sandwiches
- B) making sandwiches; cooking eggs
- C) neither of these activities; both activities
- D) both activities; neither of these activities

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

18) Tom takes 20 minutes to cook an egg and 5 minutes to make a sandwich. Jerry takes 15 minutes to cook an egg and 3 minutes to make a sandwich. If Tom and Jerry trade

- A) Tom will benefit and Jerry will not.
- B) Jerry will benefit and Tom will not.
- C) both will benefit.
- D) none of them will benefit.

Answer: C

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

19) Tom takes 20 minutes to cook an egg and 5 minutes to make a sandwich. Jerry takes 15 minutes to cook an egg and 3 minutes to make a sandwich. Both individuals will be better off if

- A) Tom trades sandwiches in exchange for eggs.
- B) Jerry trades sandwiches in exchange for eggs.
- C) they trade, no matter who trades sandwiches and who eggs.
- D) they don't trade.

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

20) In one week Alice can produce 5 pairs of shoes or 4 bookshelves while Roger can produce 10 pairs of shoes or 6 bookshelves. Alice has \_\_\_\_\_ advantage in producing \_\_\_\_\_.

- A) an absolute; shoes
- B) a comparative; shoes
- C) an absolute; bookshelves
- D) a comparative; bookshelves

Answer: D

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

21) In one week Alice can produce 5 pairs of shoes or 4 bookshelves while Roger can produce 10 pairs of shoes or 6 bookshelves. Alice should specialize in the production of

- A) shoes.
- B) bookshelves.
- C) either shoes or bookshelves.
- D) neither shoes nor bookshelves.

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

22) In an hour, Andy can make either 5 pizzas or 12 pies and Chris can make either 6 pizzas or 18 pies. \_\_\_\_\_ advantage in making pizzas.

- A) Andy has an absolute
- B) Andy has a comparative
- C) Chris has a comparative
- D) None of the above answers is correct.

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

23) Betty and Ann live on a desert island. With a day's labor, Ann can produce 8 fish or 4 coconuts; Betty can produce 6 fish or 2 coconuts. Ann's opportunity cost of producing 1 coconut is \_\_\_\_\_ and she should specialize in the production of \_\_\_\_\_.

- A) 8 fish per coconut; fish
- B) 2 fish per coconut; coconuts
- C) 6 fish per coconut; coconuts
- D) 0 fish per coconut; coconuts

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

24) Betty and Ann live on a desert island. With a day's labor, Ann can produce 6 fish or 4 coconuts; Betty can produce 3 fish or 1 coconut. Betty's opportunity cost of producing 1 fish is \_\_\_\_\_, and she should specialize in the production of \_\_\_\_\_.

- A)  $\frac{1}{3}$  coconut per fish; fish
- B)  $\frac{2}{3}$  coconut per fish; coconuts
- C) 1 coconut per fish; fish
- D) 4 coconuts per fish; fish

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking



- 25) Homer and Teddy are stranded on a desert island. To feed themselves each day they can either catch fish or pick fruit. In a day, Teddy could pick 60 pieces of fruit or catch 20 fish. Homer could pick 100 pieces of fruit or catch 150 fish. Which of the following is CORRECT?
- A) Homer has a comparative advantage in catching fish and Teddy has a comparative advantage in picking fruit.
  - B) Homer has a comparative advantage in picking fruit and Teddy has a comparative advantage in catching fish.
  - C) Homer has a comparative advantage in both catching fish and picking fruit.
  - D) Teddy has a comparative advantage in both catching fish and picking fruit.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

Blue Violet's production possibilities		Orange Rose's production possibilities	
Teapots (number per week)	Coffeepots (number per week)	Teapots (number per week)	Coffeepots (number per week)
150	& 0	75	& 0
100	& 25	50	& 50
50	& 50	25	& 100
0	& 75	0	& 150

- 26) Two countries, Blue Violet and Orange Rose, produce only two goods: teapots and coffeepots. The table above gives their production possibilities. \_\_\_\_\_ has a comparative advantage in teapots and \_\_\_\_\_ has a comparative advantage in coffeepots.
- A) Orange Rose; Blue Violet
  - B) Blue Violet; Orange Rose
  - C) Blue Violet; Blue Violet
  - D) Orange Rose; Orange Rose

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

Blue Violet's production possibilities			Sweet Pansy's production possibilities		
Teapots (number per week)	&	Coffeepots (number per week)	Teapots (number per week)	&	Coffeepots (number per week)
150	&	0	150	&	0
100	&	25	100	&	50
50	&	50	50	&	100
0	&	75	0	&	150

27) Two countries, Blue Violet and Sweet Pansy, produce only two goods: teapots and coffeepots. The table above gives their production possibilities.

- A) Blue Violet has a comparative advantage in teapots.
- B) Sweet Pansy has a comparative advantage in teapots.
- C) Both have a comparative advantage in teapots.
- D) Sweet Pansy has an absolute advantage in teapots.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

28) Two countries, Blue Violet and Sweet Pansy, produce only two goods: teapots and coffeepots. The table above gives their production possibilities. With specialization and trade, Sweet Pansy produces \_\_\_\_\_ and Blue Violet produces \_\_\_\_\_.

- A) 150 coffeepots, 150 teapots
- B) 150 teapots, 75 coffeepots
- C) 150 teapots and 150 coffeepots, nothing
- D) 100 teapots and 25 coffeepots, 100 teapots and 50 coffeepots

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

Country A		Country B	
Good X (units of X)	Good Y (units of Y)	Good X (units of X)	Good Y (units of Y)
0	16	0	12
2	12	2	9
4	8	4	6
6	4	6	3
8	0	8	0

29) In the table above, country A is producing 4 units of X and 8 units of Y and country B is producing 4 units of X and 6 units of Y. The opportunity cost of producing more of

- A) good X is the same for both countries.
- B) good Y is the same for both countries.
- C) good X is lower in country A.
- D) good Y is lower in country A.

Answer: D

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

30) In the table above, country A is producing 4 units of X and 8 units of Y and country B is producing 4 units of X and 6 units of Y. Regarding the production of good X

- A) country A has an absolute advantage.
- B) country B has an absolute advantage.
- C) country A has a comparative advantage.
- D) country B has a comparative advantage.

Answer: D

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

31) In the table above, country B is producing 4 units of X and 6 units of Y. For country B, the opportunity cost of producing an additional unit of X is

- A) 4 units of Y per unit of X.
- B) 2 units of Y per unit of X.
- C)  $\frac{3}{2}$  units of Y per unit of X.
- D) 1 unit of Y per unit of X.

Answer: C

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

32) In the table above, country B is producing 4 units of X and 6 units of Y. For country B, the opportunity cost of producing an additional unit of Y is

- A) 1/2 unit of X per unit of Y.
- B) 2/3 unit of X per unit of Y.
- C) 2 units of X per unit of Y.
- D) 3 units of X per unit of Y.

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

33) Both Mergatroid and the Geebocks produce only gizmos and widgets. It is possible for Mergatroid to have

- A) an absolute and a comparative advantage in both products.
- B) an absolute but not a comparative advantage in both products.
- C) a comparative but not an absolute advantage in both products.
- D) neither a comparative nor an absolute advantage in both products.

Answer: B

Topic: Absolute Advantage

Skill: Recognition

AACSB: Reflective thinking

34) A person who has an absolute advantage in the production of all goods will

- A) also have a comparative advantage in the production of all goods.
- B) not be able to gain from specialization and exchange.
- C) have a production possibilities frontier with a constant slope.
- D) have a comparative advantage in the production of some goods but not in the production of others.

Answer: D

Topic: Absolute Advantage

Skill: Recognition

AACSB: Reflective thinking

35) A country that has an absolute advantage in producing all goods will \_\_\_\_\_.

- A) have a comparative advantage in some goods but not all
- B) produce all goods at lowest opportunity cost
- C) have a comparative advantage in all goods
- D) not gain from specialization and trade

Answer: A

Topic: Comparative Advantage

Skill: Conceptual

AACSB: Reflective thinking

36) Homer and Teddy are stranded on a desert island. To feed themselves each day they can either catch fish or pick fruit. In a day, Teddy could pick 60 pieces of fruit or catch 20 fish. Homer could pick 100 pieces of fruit or catch 150 fish. Which of the following statements is CORRECT?

- A) Homer has an absolute advantage in catching fish and Teddy has an absolute advantage in picking fruit.
- B) Homer has an absolute advantage in picking fruit and Teddy has an absolute advantage in catching fish.
- C) Homer has an absolute advantage in both catching fish and picking fruit.
- D) Teddy has an absolute advantage in both catching fish and picking fruit.

Answer: C

Topic: Absolute Advantage

Skill: Analytical

AACSB: Analytical thinking

	Don's production possibilities	Bob's production possibilities
Pens	10	5
Pencils	20	15

37) The above table shows the number of pencils or pens that could be produced by Don and Bob in an hour. This schedule shows that

- A) Don has an absolute advantage in the production of pencils, and Bob has an absolute advantage in the production of pens.
- B) Bob has an absolute advantage in the production of pencils, and Don has an absolute advantage in the production of pens.
- C) Don has a comparative advantage in the production of both pencils and pens.
- D) Bob has a comparative advantage in the production of pencils.

Answer: D

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

	U.S. production possibilities	France's production possibilities
Steel	100	25
Concrete	200	100

38) The above table shows the tons of steel and concrete that can be produced by the United States and France in an hour. From the data in the table

- A) France has a comparative advantage in the production of concrete.
- B) the United States has a comparative advantage in the production of concrete.
- C) France has an absolute advantage in the production of concrete.
- D) the United States has a comparative advantage in the production of both goods.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

39) Agnes can produce either 1 unit of  $X$  or 1 unit of  $Y$  in an hour, while Brenda can produce either 2 units of  $X$  or 4 units of  $Y$  in an hour. The opportunity cost of producing a unit of  $X$  is

- A) 1 unit of  $Y$  per unit of  $X$  for Agnes and 2 units of  $Y$  per unit of  $X$  for Brenda.
- B) 1 unit of  $Y$  per unit of  $X$  for Agnes and  $1/2$  unit of  $Y$  per unit of  $X$  for Brenda.
- C) 1 hour for Agnes and  $1/2$  hour for Brenda.
- D) 1 hour for Agnes and 2 hours for Brenda.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

40) Agnes can produce either 1 unit of  $X$  or 1 unit of  $Y$  in an hour, while Brenda can produce either 2 units of  $X$  or 4 units of  $Y$  in an hour. The opportunity cost of producing a unit of  $Y$  is

- A) 1 unit of  $X$  per unit of  $Y$  for Agnes and 2 units of  $X$  per unit of  $Y$  for Brenda.
- B) 1 unit of  $X$  per unit of  $Y$  for Agnes and  $1/2$  unit of  $X$  per unit of  $Y$  for Brenda.
- C) 1 hour for Agnes and  $1/2$  hour for Brenda.
- D) 1 hour for Agnes and 2 hours for Brenda.

Answer: B

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

41) Agnes can produce either 1 unit of  $X$  or 1 unit of  $Y$  in an hour, while Brenda can produce either 2 units of  $X$  or 4 units of  $Y$  in an hour. There can be gains from exchange

A) if Agnes specializes in the production of  $X$  and Brenda specializes in the production of  $Y$ .

B) if Agnes specializes in the production of  $Y$  and Brenda specializes in the production of  $X$ .

C) only if Agnes becomes faster at producing  $X$ .

D) only if Brenda becomes faster at producing  $X$  or  $Y$ .

Answer: A

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

42) Agnes can produce either 1 unit of  $X$  or 1 unit of  $Y$  in an hour, while Brenda can produce either 2 units of  $X$  or 4 units of  $Y$  in an hour.

A) Brenda has an absolute advantage in the production of  $X$  and  $Y$ .

B) Agnes has a comparative advantage in the production of  $Y$ .

C) Brenda has a comparative advantage in the production of  $X$ .

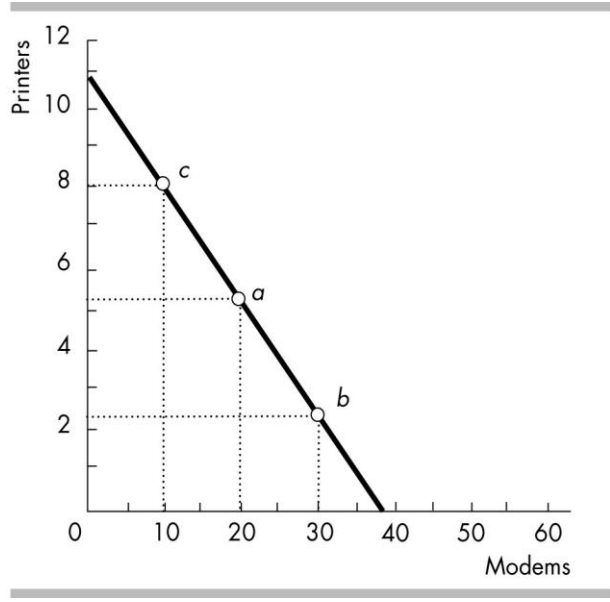
D) Brenda cannot gain from trade.

Answer: A

Topic: Absolute Advantage

Skill: Analytical

AACSB: Analytical thinking



43) Vicky currently produces at point *a* in the figure above. If Vicky moves from point *a* to point *b* to point *c*, her opportunity cost of a modem \_\_\_\_\_.

- A) decreases
- B) increases
- C) is zero
- D) remains the same

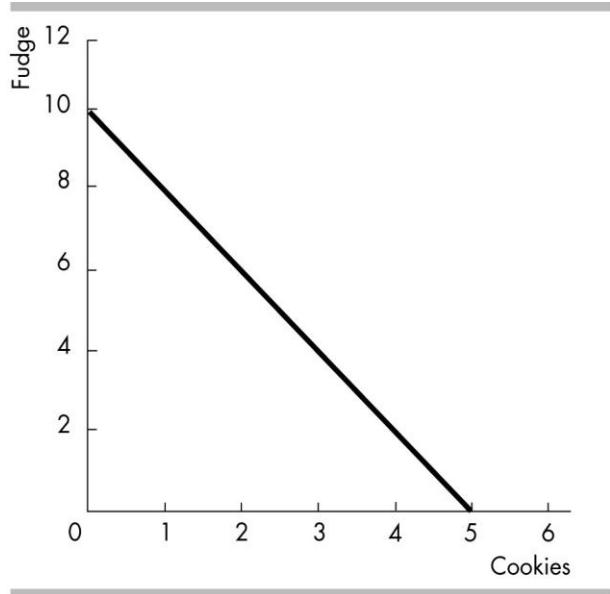
Answer: D

Topic: Comparative Advantage, Opportunity Cost

Skill: Conceptual

AACSB: Analytical thinking





44) The figure above shows Freda's *PPF*. Freda currently produces 10 packets of fudge and no cookies. If Freda decides to produce 1 packet of cookies, her opportunity cost of the packet of cookies is \_\_\_\_\_ of fudge.

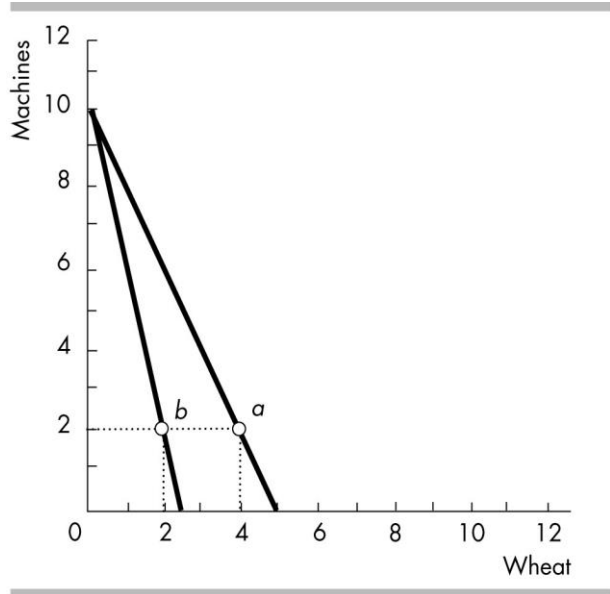
- A) 1 packet
- B) 1/2 packet
- C) 2 packets
- D) 0 packets

Answer: C

Topic: Comparative Advantage, Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking



45) An economy produces at point *a* on the *PPF* shown in the above figure. A drought reduces the amount of wheat produced and the economy produces at point *b*. The opportunity cost of a unit of wheat \_\_\_\_\_.

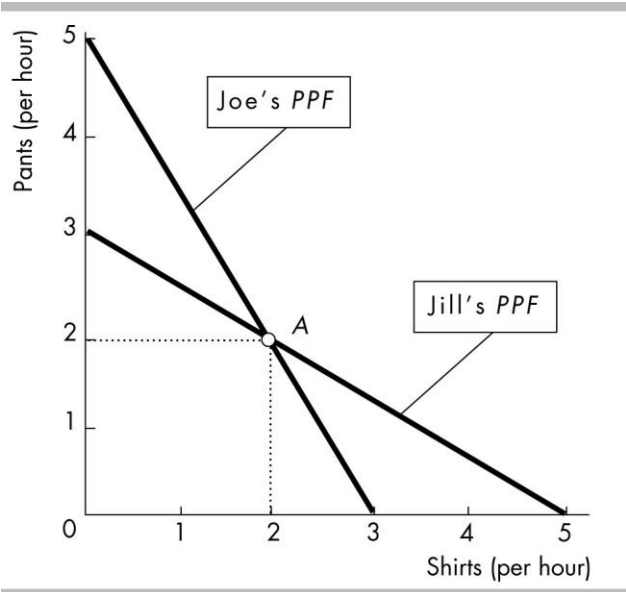
- A) remains the same
- B) increases
- C) is impossible to calculate without numbers on the axes
- D) decreases

Answer: B

Topic: Comparative Advantage, Opportunity Cost

Skill: Conceptual

AACSB: Analytical thinking



46) In the figure above, Joe is producing at point A. Joe's opportunity cost of producing one shirt is

- A)  $\frac{5}{3}$  of a pair of pants per shirt.
- B)  $\frac{3}{5}$  of a pair of pants per shirt.
- C) 5 pairs of pants per shirt.
- D) 2 pairs of pants per shirt.

Answer: D

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

47) In the figure above, Jill is producing at point A. Jill's opportunity cost producing one pair of pants is

- A) 2 shirts per pair of pants.
- B) 3 shirts per pair of pants.
- C)  $\frac{3}{5}$  of a shirt per pair of pants.
- D)  $\frac{5}{3}$  of a shirt per pair of pants.

Answer: A

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

48) In the figure above, both Joe and Jill initially produce at point A. If Joe and Jill realize that they each possess a comparative advantage, which outcome can we expect?

- A) Joe will specialize in shirts and Jill will specialize in pants.
- B) Joe will specialize in pants and Jill will specialize in shirts.
- C) Joe and Jill each will be able to consume more than 2 shirts and 2 pairs of pants.
- D) Both answers B and C are correct.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

49) One of the largest categories of exports from the United States is now pop culture: movies, music, TV programming, and videos. A direct conclusion from this information is that, compared to other countries, the United States has

- A) lower wages for producers of pop culture.
- B) higher wages for producers of pop culture.
- C) an absolute advantage in producing pop culture.
- D) a comparative advantage in producing pop culture.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

50) One of the largest categories of exports from the United States is now pop culture: movies, music, TV programming, and videos. A direct conclusion from this information is that, compared to other countries, the United States has

- A) lower wages for producers of pop culture.
- B) higher wages for producers of pop culture.
- C) a higher opportunity cost of producing pop culture.
- D) a lower opportunity cost of producing pop culture.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

51) A country that has a comparative advantage in producing capital goods will \_\_\_\_\_ a country that has a comparative advantage in consumption goods.

- A) reap all of the gains from trade when it trades with
- B) grow slower than
- C) reap fewer of the gains from trade when it trades with
- D) specialize in producing capital goods and trade with

Answer: D

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

52) George and Michael can gain from exchange

- A) unless one has an absolute advantage in all goods.
- B) if each specializes in the production of the good for which he has the higher opportunity cost.
- C) if each specializes in the production of the good for which he has the lower opportunity cost.
- D) unless they have different opportunity costs.

Answer: C

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Reflective thinking

53) Tom and Di grow tomatoes and turnips. Tom has a comparative advantage in growing tomatoes if \_\_\_\_\_.

- A) Tom can grow more tomatoes than Di can
- B) his opportunity cost of tomatoes is less than Di's opportunity cost of tomatoes
- C) his opportunity cost of tomatoes is less than his opportunity cost of turnips
- D) his marginal benefit from tomatoes is greater than Di's

Answer: B

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

54) If Tom and Di specialize in producing the goods in which he and she have a comparative advantage and they exchange goods, then \_\_\_\_\_.

- A) each will produce a combination of goods that is within her/his production possibility frontier
- B) they will lose because they are no longer able to produce and consume both goods
- C) each will gain because each can consume a combination of goods that is outside her/his production possibility frontier
- D) one of them will gain and the other will lose

Answer: C

Topic: Achieving the Gains From Trade

Skill: Recognition

AACSB: Reflective thinking

55) When a nation has a comparative advantage in the production of a particular good

- A) the nation tends to avoid specialization.
- B) the comparative advantage encourages self-sufficiency.
- C) the opportunity cost of producing that good is higher than that of other goods.
- D) the nation can gain from trade.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Recognition

AACSB: Reflective thinking

56) To obtain the gains available from comparative advantage, individuals or countries must do more than specialize; they must also

- A) save.
- B) invest.
- C) engage in research and development.
- D) trade.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

57) According to the principle of comparative advantage, if a rich country trades with a poor country, then

- A) the rich country will benefit and the poor country will lose.
- B) the rich country will lose and the poor country will benefit.
- C) both countries will benefit.
- D) neither of the countries will benefit.

Answer: C

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Written and oral communication

58) The idea of comparative advantage implies that people or countries

- A) should specialize in the production of goods.
- B) can gain from trading.
- C) can consume at a point outside their production possibilities frontier.
- D) all of the above.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

59) By specialization and trade, two individuals can

- A) consume at a point beyond their individual production possibilities frontiers.
- B) increase their comparative advantage.
- C) increase their absolute advantage.
- D) shift their individual production possibilities frontiers outward.

Answer: A

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

60) Suppose that the United States and Cuba decide to open up trade. If each country specializes in the good in which it has a comparative advantage, \_\_\_\_\_ will gain from that trade because \_\_\_\_\_.

A) both countries; consumption possibilities in both Cuba and the United States will lie outside their *PPFs*.

B) neither country; their consumption possibilities will not change.

C) only the United States; consumption possibilities in Cuba will lie outside its *PPF* and U.S. consumption possibilities will not change.

D) only Cuba; consumption possibilities in Cuba will lie outside its *PPF* and U.S. consumption possibilities will not change.

Answer: A

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Written and oral communication

61) In one day, Sue can change the oil on 20 cars or change the tires on 20 cars. In one day, Fred can change the oil on 20 cars or change the tires on 10 cars. Sue and Fred can gain from trade if Sue changes the \_\_\_\_\_ and Fred changes the \_\_\_\_\_.

A) tires; oil

B) oil; oil

C) oil; tires

D) tires; tires

Answer: A

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

62) Missouri can produce 10,000 tons of pecans per year or 5,000 tons of pears per year. Washington can produce 12,000 tons of pecans per year or 48,000 tons of pears per year. Which of the following statements about opportunity cost is CORRECT?

A) The opportunity cost of a ton of pecans is 2 tons of pears per ton of pecans for Missouri and 1/4 ton of pears per ton of pecans for Washington.

B) The opportunity cost of a ton of pears is 2 tons of pecans per ton of pears for Missouri and 1/4 ton of pecans per ton of pears for Washington.

C) The opportunity cost of a ton of pecans is 1/2 ton of pears per ton of pecans for Missouri and 4 tons of pears per ton of pecans for Washington.

D) Both answers B and C are correct.

Answer: D

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

63) Missouri can produce 10,000 tons of pecans per year or 5,000 tons of pears per year. Washington can produce 12,000 tons of pecans per year or 48,000 tons of pears per year. Which of the following statements is TRUE?

- A) Washington has an absolute advantage in the production of both pecans and pears.
- B) Washington has a comparative advantage in the production of both pecans and pears.
- C) Washington has a comparative advantage in producing pecans and Missouri has a comparative advantage in producing pears.
- D) Both answers A and C are correct.

Answer: A

Topic: Achieving the Gains From Trade

Skill: Conceptual

AACSB: Analytical thinking

64) Missouri can produce 10,000 tons of pecans per year or 5,000 tons of pears per year. Washington can produce 12,000 tons of pecans per year or 48,000 tons of pears per year. If these two states were to engage in trade, which of the following is TRUE?

- A) Missouri would specialize in pear production and trade pears to Washington pecans.
- B) Missouri would specialize in pecan production and trade pecans to Washington for pears.
- C) Washington would produce both pears and pecans and Missouri would produce neither.
- D) Half of both Washington's and Missouri's resources would be devoted to pears and the other half to pecans because that is the comparative advantage.

Answer: B

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

65) Suppose that a typical German factory can produce 20 cameras or 1 computer in an hour, and that a typical American factory can produce 10 cameras or 1 computer in an hour. The opportunity cost of 20 cameras in terms of computers in Germany is

- A) 10 computers per camera.
- B) 2 computers per camera.
- C) 1 computer per camera.
- D) 1/20 of a computer per camera.

Answer: C

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking



66) Suppose that a typical German factory can produce 20 cameras or 1 computer in an hour, and that a typical American factory can produce 10 cameras or one computer in an hour. The opportunity cost of 20 cameras in terms of computers in the United States is

- A) 10 computers per camera.
- B) 2 computers per camera.
- C) 1 computer per camera.
- D) 1/20 of a computer per camera.

Answer: B

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

67) Suppose that a typical German factory can produce 20 cameras or 1 computer in an hour, and that a typical American factory can produce 10 cameras or one computer in an hour. If Germany produces one less computer and switches resources to cameras, and the United States produces one more computer and takes resources out of cameras, then the net change in camera production in both countries taken together is

- A) 0.
- B) minus 10 cameras.
- C) plus 10 cameras.
- D) plus 20 cameras.

Answer: C

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

68) Suppose that a typical German factory can produce 20 cameras or 1 computer in an hour, and that a typical American factory can produce 10 cameras or one computer in an hour. Germany wishes to purchase computers from the United States in exchange for cameras. What is the maximum number of cameras per computer that Germany would be willing to pay the United States?

- A) 10 cameras per computer
- B) 20 cameras per computer
- C) 1 camera per computer
- D) 2 cameras per computer

Answer: B

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking

	U.S. production possibilities	France's production possibilities
Steel	100	25
Concrete	200	100

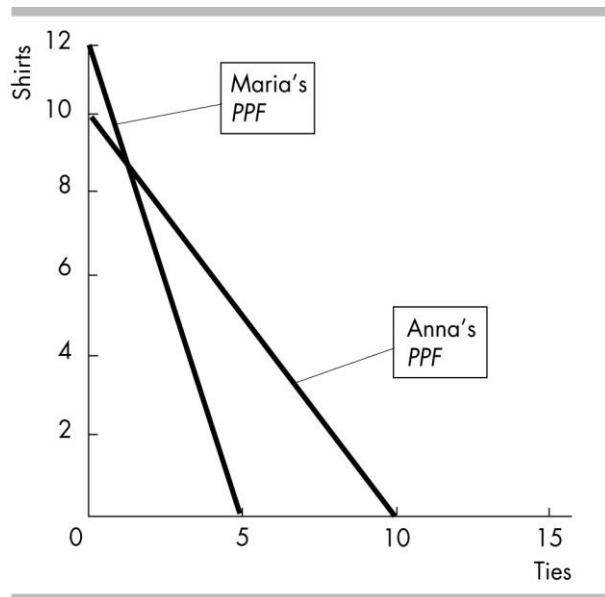
- 69) The data in the above table demonstrates that gains from trade can be captured if
- A) the United States produced both goods.
  - B) the United States produced steel in exchange for concrete produced in France.
  - C) the United States produced concrete in exchange for steel produced in France.
  - D) each country became self-sufficient, produced both goods for itself, and did not engage in trade.

Answer: B

Topic: Achieving the Gains From Trade

Skill: Analytical

AACSB: Analytical thinking



- 70) Anna and Maria produce shirts and ties. The figure above shows Anna's *PPF* and Maria's *PPF*. Anna and Maria can achieve the gains from trade if Anna produces \_\_\_\_\_ and Maria produces \_\_\_\_\_.

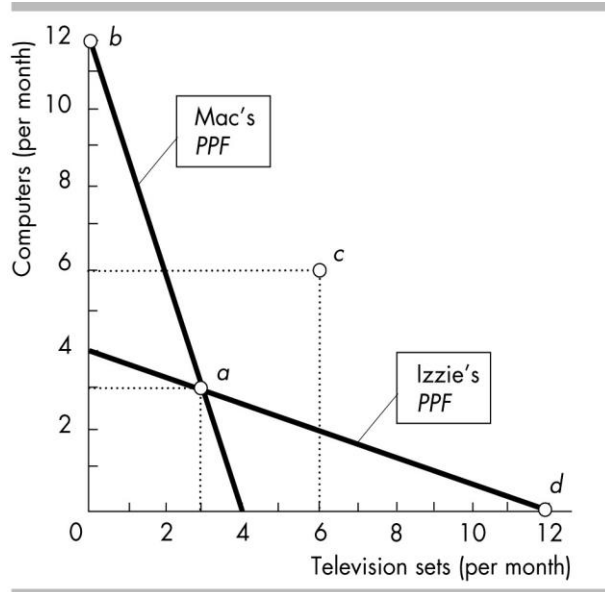
- A) ties; shirts
- B) shirts and ties; only ties
- C) only ties; shirts and ties
- D) shirts; ties

Answer: A

Topic: Gains from Trade

Skill: Analytical

AACSB: Analytical thinking



- 71) In the figure above, suppose that Mac and Izzie trade and reach point *c*. Then
- A) Mac produces outside his production possibilities frontier.
  - B) Izzie produces outside her production possibilities frontier.
  - C) Mac and Izzie both produce outside their production possibilities frontiers.
  - D) neither Mac nor Izzie produce outside their production possibilities frontiers.

Answer: D

Topic: Gains from Trade

Skill: Conceptual

AACSB: Analytical thinking

- 72) In the figure above, suppose that Mac and Izzie trade and reach point *c*. Then
- A) Mac and Izzie should both produce at point *a*.
  - B) Mac should produce at point *b* and Izzie should produce at point *d*.
  - C) Mac should produce at point *d* and Izzie should produce at point *b*.
  - D) Mac and Izzie should both produce at point *c*.

Answer: B

Topic: Gains from Trade

Skill: Analytical

AACSB: Analytical thinking

- 73) In the figure above, if Mac and Izzie both completely specialized and traded with one another, their joint output would be
- A) 3 computers and 3 TV sets per month.
  - B) 6 computers and 6 TV sets per month.
  - C) 12 computers and 12 TV sets per month.
  - D) 24 computers and 24 TV sets per month.

Answer: C

Topic: Gains from Trade

Skill: Analytical

AACSB: Analytical thinking

74) In the figure above, suppose that Mac and Izzie specialize and trade to reach point *c*. Mac sends Izzie

- A) 12 computers in exchange for 12 TVs.
- B) 12 computers in exchange for 6 TVs.
- C) 6 computers in exchange for 12 TVs.
- D) 6 computers in exchange for 6 TVs.

Answer: D

Topic: Gains from Trade

Skill: Analytical

AACSB: Analytical thinking

75) In order to achieve the maximum gains from trade, people should specialize according to

- A) property rights.
- B) *PPF*.
- C) absolute advantage.
- D) comparative advantage.

Answer: D

Topic: Study Guide Question, Gains From Trade

Skill: Conceptual

AACSB: Reflective thinking

76) In one day, Brandon can either plow 10 acres or plant 20 acres. In one day, Christopher can either plow 14 acres or plant 14 acres. Which of the following statements about comparative advantage is CORRECT?

- A) Brandon has a comparative advantage in both plowing and planting.
- B) Brandon has a comparative advantage only in plowing.
- C) Brandon has a comparative advantage only in planting.
- D) Christopher has a comparative advantage in both plowing and planting.

Answer: C

Topic: Study Guide Question, Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

77) In one day, Brandon can either plow 10 acres or plant 20 acres. In one day, Christopher can either plow 14 acres or plant 14 acres. Brandon and Christopher can

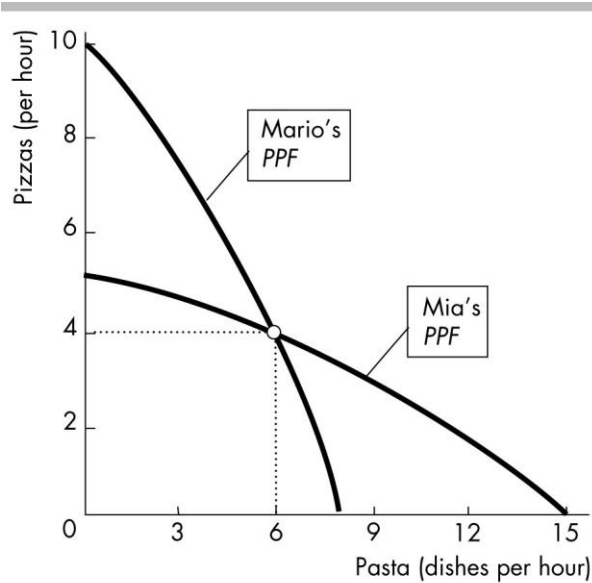
- A) gain from exchange if Brandon specializes in planting and Christopher specializes in plowing.
- B) gain from exchange if Brandon specializes in plowing and Christopher specializes in planting.
- C) exchange, but only Brandon will gain from the exchange.
- D) exchange, but only Christopher will gain from the exchange.

Answer: A

Topic: Study Guide Question, Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking



78) Refer to the above figure. Mario is self-sufficient and so is Mia. Each produces 6 dishes of pasta and 4 pizzas. Mario and Mia decide to specialize and trade. After they have specialized and traded, compared to the initial situation, Mia's opportunity cost of pasta has \_\_\_\_\_ and Mario's opportunity cost of a pizza has \_\_\_\_\_.

- A) decreased, decreased
- B) decreased, increased
- C) increased, increased
- D) increased, decreased

Answer: C

Topic: Parallel MyEconLab Questions, Achieving the Gains from Trade

Skill: Analytical

AACSB: Analytical thinking

## 5 Economic Coordination

1) The term "market" refers to

- A) physical structures only.
- B) locations where buyers and sellers physically meet.
- C) any arrangement that enables buyers and sellers to get information and trade with one another.
- D) trading arrangements that have been approved by the government.

Answer: C

Topic: Markets

Skill: Recognition

AACSB: Reflective thinking

2) Markets are best defined as

- A) arrangements where buyers and sellers get together to buy and sell.
- B) specific geographic locations where people get together to buy and sell.
- C) hypothetical constructs used to analyze how people form their tastes and preferences.
- D) places where people can inspect goods and services carefully.

Answer: A

Topic: Markets

Skill: Recognition

AACSB: Reflective thinking

3) Markets

- A) facilitate trade.
- B) allow traders to enjoy gains from trade.
- C) coordinate price information between buyers and sellers.
- D) All of the above answers are correct.

Answer: D

Topic: Markets

Skill: Recognition

AACSB: Reflective thinking

4) Which of the following is TRUE regarding markets?

- I) Economists define a market as a geographic location where trade occurs.
  - II) A market enables buyers and sellers to get information about each other and to buy and sell from each other.
  - III) Markets coordinate decisions through prices.
- A) I only
  - B) I and III
  - C) II and III
  - D) I, II and III

Answer: C

Topic: Markets

Skill: Conceptual

AACSB: Reflective thinking

5) Two social institutions that are essential for trade to be organized are \_\_\_\_\_.

- A) property rights and laws
- B) markets and banks
- C) businesses and banks
- D) markets and property rights

Answer: D

Topic: Markets

Skill: Recognition

AACSB: Reflective thinking

6) The social arrangements that govern the ownership, use, and disposal of property are referred to as

- A) the double coincidence of wants.
- B) capitalism.
- C) private enterprise.
- D) property rights.

Answer: D

Topic: Property Rights

Skill: Recognition

AACSB: Reflective thinking

7) In order to societies to reap the gains from trade, it is necessary to

- A) define and enforce property rights.
- B) foster economic growth.
- C) distribute resources equally.
- D) achieve productive efficiency.

Answer: A

Topic: Property Rights

Skill: Conceptual

AACSB: Reflective thinking

8) In a world lacking property rights, it would be \_\_\_\_\_ to realize the gains from trade and there would be \_\_\_\_\_ specialization.

- A) easier; less
- B) easier; more
- C) harder; less
- D) harder; more

Answer: C

Topic: Property Rights

Skill: Conceptual

AACSB: Reflective thinking

9) The rights of an owner to use and exchange property are

- A) capitalist rights.
- B) socialist rights.
- C) property rights.
- D) money rights.

Answer: C

Topic: Property Rights

Skill: Recognition

AACSB: Reflective thinking

10) The social arrangement that gives John Grisham, the writer of best-selling novels, the ownership of his novels is

- A) a market.
- B) property rights.
- C) absolute advantage.
- D) dynamic comparative advantage.

Answer: B

Topic: Property Rights

Skill: Recognition

AACSB: Reflective thinking

11) If property rights are not clearly defined and enforced, then

- A) incentives for specialization based on comparative advantage are weakened.
- B) some potential gains from specialization and trade are lost.
- C) resources are devoted to protecting possessions rather than to production.
- D) All of the above answers are correct.

Answer: D

Topic: Property Rights

Skill: Conceptual

AACSB: Reflective thinking

12) A system of property rights

- A) encourages economic growth by creating incentives to invest in capital and to be innovative.
- B) discourages economic growth by discouraging the development of new ideas and ways of doing things.
- C) reduces the efficiency of government, which reduces the growth rate of the economy over time.
- D) encourages investment but discourages entrepreneurial activity, so the effect on economic growth is uncertain.

Answer: A

Topic: Property Rights

Skill: Conceptual

AACSB: Reflective thinking

13) Intellectual property

- A) is protected by common law rather than by written laws.
- B) is protected by people's sense of decency rather than by written laws.
- C) belongs to everyone with the necessary human capital to use it.
- D) is often protected by copyrights and patents.

Answer: D

Topic: Property Rights

Skill: Recognition

AACSB: Reflective thinking



14) A computer software program is most strongly an example of

- A) real property.
- B) fiat property.
- C) intellectual property.
- D) vicarious property.

Answer: C

Topic: Property Rights

Skill: Analytical

AACSB: Reflective thinking

15) A factor market is a market in which

- A) households buy goods and services.
- B) households sell the services of the factors of production they control.
- C) firms sell the services of the factors of production.
- D) firms sell goods and services.

Answer: B

Topic: The Circular Flows

Skill: Recognition

AACSB: Reflective thinking

16) In goods markets \_\_\_\_\_ and in factor markets \_\_\_\_\_.

- A) households sell to firms; firms sell to households
- B) firms sell to households; households sell to firms
- C) households sell to firms; households sell to firms
- D) firms sell to households; firms sell to households

Answer: B

Topic: Circular Flow

Skill: Recognition

AACSB: Reflective thinking

17) Individual economic decisions are coordinated by

- A) markets through adjustments in sales levels.
- B) markets through adjustments in prices.
- C) government through adjustments in sales taxes.
- D) government through adjustments in income taxes.

Answer: B

Topic: Coordinating Decisions

Skill: Recognition

AACSB: Reflective thinking

18) Which of the following does NOT help organize trade?

- A) property rights
- B) markets
- C) the production possibilities frontier
- D) None of the above because all these answers given help organize trade.

Answer: C

Topic: Study Guide Question, Coordinating Decisions

Skill: Recognition

AACSB: Reflective thinking

19) In markets, people's decisions are coordinated by

- A) specialization according to absolute advantage.
- B) changes in property rights.
- C) learning-by-doing.
- D) adjustments in prices.

Answer: D

Topic: Study Guide Question, Coordinating Decisions

Skill: Recognition

AACSB: Reflective thinking

#### 6 News Based Questions

1) The state of Georgia offers free college tuition to high school students with a "B" average. In 2007, the state raised the requirement so that fewer students qualified for the scholarship. At the same time, Georgia increased state spending on health care. Suppose that college education is on the vertical axis and health care is on the horizontal axis of a *PPF*. These changes

- A) are example of a tradeoff.
- B) are an example of incentives.
- C) will cause a shift out of the *PPF*.
- D) will cause a shift in the of the *PPF*.

Answer: A

Topic: Production Possibilities and Tradeoffs

Skill: Conceptual

AACSB: Reflective thinking

2) The state of Georgia offers free college tuition to high school students with a "B" average. In 2007, the state raised the requirement so that fewer students qualified for the scholarship. At the same time, Georgia increased state spending on health care. Suppose that college education is on the vertical axis and health care is on the horizontal axis of a *PPF*. Georgia's change in spending would be shown as

- A) a movement up along the *PPF*.
- B) a movement down along the *PPF*.
- C) a shift out of the *PPF*.
- D) a shift in of the *PPF*.

Answer: B

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Analytical thinking

3) The United States uses tax funds to build and repair the interstate highway system and to provide health care services via Medicare. Suppose Medicare services are on the horizontal axis and highway miles are on the vertical axis of a *PPF*. If the government decides to reduce funding to Medicare, this change would be shown as

- A) a shift out of the *PPF*.
- B) the *PPF* becoming flatter.
- C) a movement down along the *PPF*.
- D) a movement up along the *PPF*.

Answer: D

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Analytical thinking

4) BAE, a British defense company, has the contract to produce Tornado aircraft for the Royal Air Force. The BBC produces high-quality mystery shows for the British government. Both produce at the lowest possible cost. On a *PPF* with aircraft and mystery shows on the axes

- A) BAE and the BBC do not face increasing opportunity costs.
- B) BAE and the BBC are achieving production efficiency.
- C) BAE and the BBC are producing at a point outside the *PPF*.
- D) the British government is operating outside its *PPF*.

Answer: B

Topic: Production Efficiency

Skill: Conceptual

AACSB: Analytical thinking

5) BAE, a British defense company, has the contract to produce Tornado aircraft for the Royal Air Force. BAE is producing the aircraft at the lowest possible cost. If the RAF orders one more Tornado, there will be

- A) a decrease in opportunity costs as average costs decrease.
- B) a misallocation of resources.
- C) an increase in opportunity cost for Tornados.
- D) an outward shift in the *PPF*.

Answer: C

Topic: Opportunity Cost

Skill: Conceptual

AACSB: Reflective thinking

6) Employees at Bank of America are good at providing banking services and workers at Ben & Jerry's are good at making ice cream. If some bankers are moved to making ice cream, we get a small increase in the amount of ice cream produced and a large decrease in the amount of banking services provided. If the *PPF* has banking services on the vertical axis and ice cream on the horizontal axis, the effect of the change reflects

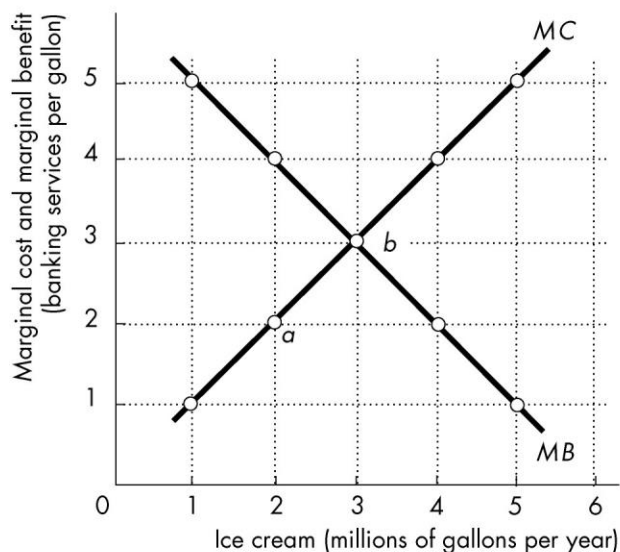
- A) decreasing opportunity costs.
- B) a bowed out *PPF* for banking services and ice cream.
- C) production efficiency.
- D) a shift to a flatter *PPF*.

Answer: B

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Reflective thinking



7) Employees at Bank of America are good at providing banking services and workers at Ben & Jerry's are good at making ice cream. The figure above shows the marginal cost and marginal benefit curves for ice cream. As Ben & Jerry's increases production from 1 to 2 million gallons of ice cream, the

- A) marginal cost curve shifts downward.
- B) marginal cost curve shifts upward.
- C) opportunity cost of ice cream decreases.
- D) opportunity cost of ice cream increases to 2 banking services per gallon.

Answer: D

Topic: Using Resources Efficiently

Skill: Analytical

AACSB: Analytical thinking

8) Employees at Bank of America are good at providing banking services and workers at Ben & Jerry's are good at making ice cream. The figure above shows the marginal cost and marginal benefit curves for ice cream. A movement from point *a* to point *b* reflects

- A) the economy must give up banking services to get extra gallons of ice cream.
- B) the opportunity cost of banking services increases.
- C) a decrease in the tradeoff between ice cream and banking services.
- D) a leftward shift in the marginal benefit curve.

Answer: A

Topic: Marginal Cost Curve

Skill: Analytical

AACSB: Analytical thinking

9) Employees at Bank of America are good at providing banking services and workers at Ben & Jerry's are good at making ice cream. The figure above shows the marginal cost and marginal benefit curves for ice cream. Point *b* represents \_\_\_\_\_ of banking services and ice cream.

- A) allocation efficiency and possibly production efficiency
- B) neither allocative nor production efficiency
- C) allocative and production efficiency in the production
- D) production efficiency and possibly allocative efficiency in the production

Answer: C

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

10) Employees at Bank of America are good at providing banking services and workers at Ben & Jerry's are good at making ice cream. The figure above shows the marginal cost and marginal benefit curves for ice cream. If 3 million gallons of ice cream are produced, marginal cost \_\_\_\_\_ marginal benefit and \_\_\_\_\_ produced.

- A) exceeds; too much ice cream is
- B) is less than; too much ice cream is
- C) exceeds; not enough ice cream is
- D) is less than; not enough banking services are

Answer: A

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

11) Employees at Bank of America are good at providing banking services and workers at Ben & Jerry's are good at making ice cream. The figure above shows the marginal cost and marginal benefit curves for ice cream. If 1 million gallons of ice cream are being produced

- A) the cost an additional gallon of ice cream is more than people think it is worth.
- B) more banking services should be produced.
- C) the marginal cost of an additional gallon of ice cream is greater the value people place on it.
- D) people value an additional gallon of ice cream more highly than its cost of production.

Answer: D

Topic: Allocatively Efficient Use of Resources

Skill: Analytical

AACSB: Analytical thinking

12) China's State Council has encouraged more spending to "improve transportation links and other infrastructure...." It will also "step up its spending on vocational training and other educational programs for adults."

www.nytimes.com, Keith Bradsher, October 19, 2008

Suppose that capital goods are on the vertical axis while consumption goods are on the horizontal axis of China's *PPF*. As a result of enacting the policies, China's *PPF* will

- A) shift outward.
- B) shift inward.
- C) rotate outward.
- D) become flatter.

Answer: A

Topic: Economic Growth

Skill: Analytical

AACSB: Analytical thinking

13) China's State Council has encouraged more spending to "improve transportation links and other infrastructure...." It will also "step up its spending on vocational training and other educational programs for adults."

www.nytimes.com, Keith Bradsher, October 19, 2008

Suppose that capital goods are on the vertical axis while consumption goods are on the horizontal axis of China's *PPF*. As a result of enacting the policies, we would expect

- I. an expansion of China's production possibilities.
- II. capital accumulation.
- III. an increase in human capital.

- A) I and II only.
- B) I, II and III.
- C) I and III only.
- D) II and III only.

Answer: B

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

14) Suppose that when NBC produces 1 new drama series in a season it gives up the chance to produce 3 new reality shows. This means that

- A) the opportunity cost of a new drama series is 1/3 of a new reality show.
- B) the opportunity cost of a 1 new reality show is 1/3 of a new drama series.
- C) NBC has a comparative advantage in producing new drama series.
- D) NBC has a comparative advantage in producing new reality shows.

Answer: B

Topic: Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

15) In the United States, Texas ranks number one in the amount of installed megawatts for wind power generation and Florida ranks number one in the number of beach vacations. These facts point out that

- A) Texas has a comparative advantage in wind power generation.
- B) Texas definitely has an absolute advantage in wind power generation.
- C) Florida should produce more wind energy.
- D) Florida can produce wind energy at a lower opportunity cost than can Texas.

Answer: A

Topic: Comparative Advantage

Skill: Conceptual

AACSB: Reflective thinking

## 7 Essay Questions

1) A production point beyond the production possibilities frontier represents what?

Answer: A production point beyond the production possibilities frontier is an unattainable combination of goods and services.

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Written and oral communication

2) Explain how the production possibilities frontier illustrates scarcity.

Answer: The *PPF* illustrates scarcity because we cannot attain the points outside the frontier.

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Written and oral communication

3) "If Mexico is currently operating at a point beyond its production possibilities frontier, then there are unemployed resources in Mexico." Is this statement true or false? Briefly explain your answer.

Answer: The statement is false. It is false on two counts. First, production points beyond the production possibilities frontier are unattainable, so it is not possible for Mexico to be producing at such a point. Second, points *within* not beyond the production possibilities frontier have unemployed resources.

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Written and oral communication

4) "If Mexico is currently operating at a point inside its production possibilities frontier, then there are unemployed resources in Mexico." Is this statement true or false? Briefly explain your answer.

Answer: The statement is true. Points within the production possibilities frontier are attainable, so it is possible for Mexico to be producing at a point within its frontier. At points within the production possibilities frontier, there are unemployed resources.

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Written and oral communication



5) Are all points inside the production possibilities frontier unattainable?

Answer: No, all points within the production possibilities frontier are attainable, though there are unemployed or misallocated resources at these points.

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Written and oral communication

6) In the movie *Cast Away*, Tom Hanks plays a FedEx efficiency expert stranded on a deserted island. While on the island, he divides his time between catching fish, gathering coconuts, painting, and building a raft. Suppose that these were Mr. Hanks' only activities. Did he face an opportunity cost from pursuing any of these activities? Why or why not?

Answer: Yes, Mr. Hanks faces an opportunity cost from all of these endeavors. If he decides to use his time catching fish, he cannot gather coconuts, paint, or build a raft. Whatever he would have been otherwise doing is his opportunity cost of catching fish. Similarly, time spent on building his raft means less time painting, or fewer coconuts for breakfast, or fewer fish for dinner.

Topic: Production Possibilities and Tradeoffs

Skill: Conceptual

AACSB: Written and oral communication

7) Explain the connection between opportunity cost and the *PPF*.

Answer: When moving along the production possibilities frontier, more of one good or service can be obtained only by giving up another good or service. The good or service given up is the opportunity cost of the good or service obtained.

Topic: Production Possibilities and Opportunity Costs

Skill: Conceptual

AACSB: Written and oral communication

8) Explain why the production possibilities frontier bows outward.

Answer: The bowed outward *PPF* reflects increasing opportunity costs. The opportunity cost increases as we produce more of a good because resources are not equally productive in all activities. For example, people with several years of experience working for Sony are good at producing DVDs, but not very good at making pizza. So if we want more pizza and move some of these workers from Sony to Domino's, we get a relatively large decrease in the quantity of DVDs per one additional pizza produced. Of course, first we try to move those workers who have less experience with Sony and who may have some skills to produce pizza. But if we want to produce even more pizza, we eventually will have to move some more experienced Sony workers to Domino's, where they might be very unproductive and therefore the quantity of DVDs that we will give up to produce an additional pizza, which is the opportunity cost of producing pizza, will increase.

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Written and oral communication

9) What economic concepts are represented in the production possibilities model?

Answer: There are a large number of economic concepts illustrated by the production possibilities frontier:

- Scarcity of resources: The production possibilities frontier is a frontier between attainable and unattainable combinations.
- Opportunity cost: The negative slope of the production possibilities frontier indicates that in order to get more of one good, you must produce less of the other (a tradeoff).
- Increasing opportunity cost: The bowed out production possibilities frontier represents the increasing opportunity cost when more of a good or service is produced.
- Efficiency: Points on the production possibilities frontier use all resources while points below the production possibilities frontier represent unemployment or misallocated resources.

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Written and oral communication

10) When economists state that the opportunity cost of a product increases as more of it is produced, what do they mean? What is the opportunity cost?

Answer: In general, the opportunity cost of increasing the production of one good or service is the forgone production of another good or service. The statement that the opportunity cost of a product increases as more of it is produced applies to production points on the production possibilities frontier. On the production possibilities frontier, resources are fully employed. Hence to increase the production of one good or service, resources must be switched away from the production of another good or service and hence the production of that good or service decreases. And, as more of the first good or service is produced, the opportunity cost of an additional unit becomes larger, so that the opportunity cost increases.

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Written and oral communication

11) What is the relationship between the bowed out shape of the production possibilities frontier and the increasing opportunity cost of a good as more of it is produced?

Answer: The production possibilities frontier is bowed out because the opportunity cost of a good increases as more of it is produced. As the first unit of the good measured along the horizontal axis is produced, resources that are extremely well suited for its production can be used. Because of the suitability, not many resources need to be devoted to its production, so the opportunity cost—the decrease in the production of the good measured along the vertical axis—is not large. At this location along the production possibilities frontier, the slope of the production possibilities frontier is shallow. But, as more of the product is produced, resources that are not as well suited must be devoted to its production. Consider one of the last units of this good, just before the production possibilities frontier intersects the horizontal axis. By the time the nation produces this much of the product, to produce one more unit means that resources that are extremely poorly suited in its manufacture must be used. Because these resources are not well suited, a lot of them must be used and, because a lot of them must be used, the opportunity cost in terms of the forgone other good is large. With the large decrease in the production of the good along the vertical axis, the slope of the production possibilities frontier at this location is steep. So, the production possibilities frontier goes from having a shallow slope to a steep one, that is, the production possibilities frontier is bowed outward.

Topic: Increasing Opportunity Cost

Skill: Conceptual

AACSB: Written and oral communication

12) Why does the marginal benefit curve have a negative slope?

Answer: Each successive increase in the consumption of any good or service provides a lower level of satisfaction, or benefit, than the preceding unit of consumption. For a specific example, think of drinking water on a hot day. What is the first glass worth? How about the second and third? The marginal benefit is the benefit from each additional glass of water and, as the example indicates, the marginal benefit decreases as the amount of the good increases.

Topic: Marginal Benefit

Skill: Recognition

AACSB: Written and oral communication

13) Explain the difference between marginal cost and marginal benefit.

Answer: Marginal benefit is the benefit someone in society obtains when another unit of a good or service is produced. Marginal cost is the cost to someone in society of producing another unit of a good or service.

Topic: Marginal Benefit and Marginal Cost

Skill: Conceptual

AACSB: Written and oral communication

14) Compare and contrast production efficiency and allocative efficiency.

Answer: Production efficiency means that we are operating at a point on the production possibilities frontier and so we cannot produce more of a good or service without producing less of some other good or service. Production efficiency occurs at all points on the *PPF*. At any point inside the frontier, production is inefficient because we have unemployed resources.

Allocative efficiency means that we are producing the goods and services that society values most highly and so allocative efficiency implies that we are operating on the frontier. But not every point on the production possibilities frontier is the combination of goods and services valued most highly by society.

Allocative efficiency only occurs at a single point on the *PPF*. To insure that allocative efficiency exists, we must compare the marginal benefit of a good with its marginal cost. When production is such that the marginal benefit equals the marginal cost, then we are producing the allocatively efficient level of output.

Topic: Efficient Use of Resources

Skill: Conceptual

AACSB: Written and oral communication

15) "Allocative efficiency in the production of cherries means that consumers can eat all of the cherries they desire." Is this statement true or false?

Answer: Allocative efficiency means that we are producing the goods and services society values most highly. It does not mean that consumers can afford all of the cherries that they desire. The allocatively efficient quantity of cherries is the level of production such that the marginal benefit of a pound of cherries equals the marginal cost of a pound of cherries. The marginal cost of any product will be positive, so the marginal cost of a pound of cherries at the allocatively efficient quantity will be positive. Hence for the allocatively efficient quantity of cherries, the marginal benefit of cherries also must be positive. In order for consumers to have all the cherries they desire, the marginal benefit of a pound of cherries must be zero. (If the marginal benefit is positive, consumers desire more cherries.) Therefore the allocatively efficient quantity of cherries is not the quantity at which consumers are able to eat all they desire.

Topic: Allocative Efficiency

Skill: Conceptual

AACSB: Written and oral communication

16) "If an economy is producing at a point on its *PPF*, it has achieved allocative efficiency."

True or false? Explain.

Answer: If an economy is producing at a point on its *PPF*, it has achieved *production* efficiency, but not necessarily *allocative* efficiency. We have achieved allocative efficiency if we are producing at the point on the *PPF* that we prefer to all other points because at this point we cannot produce more of any good without giving up some other good that we value more highly.

Topic: Allocative Efficiency

Skill: Conceptual

AACSB: Written and oral communication

17) "Allocative efficiency requires that the maximum number of people have access to all of the goods and services that our economy produces." Is this statement true or false? Explain your answer.

Answer: The statement is false. Allocative efficiency requires that production be such that the marginal benefit equals the marginal cost. Allocative efficiency has nothing to do with requiring that the maximum number of people have access to all the goods and services produced.

Topic: Allocative Efficiency

Skill: Conceptual

AACSB: Written and oral communication

18) What factors generate economic growth?

Answer: Two key factors create economic growth: Technological change and capital accumulation, including the accumulation of additional human capital. Both technological change and capital accumulation shift the nation's *PPF* outward.

Topic: Economic Growth

Skill: Recognition

AACSB: Written and oral communication

19) What is comparative advantage? Give an example.

Answer: Comparative advantage is the ability of a person to produce a good at a lower opportunity cost compared to another person. A lower opportunity cost means that the person gives up less to produce the good compared to another person. For example, one person may need to give up one hour of typing to get dinner made while another person must give up two hours of typing to produce the same dinner.

Topic: Comparative Advantage

Skill: Conceptual

AACSB: Written and oral communication

20) Why is it likely that the United States has an absolute advantage in goods and yet it still ends up importing them from other countries?

Answer: The United States might have an absolute advantage in producing a good but not a comparative advantage. In this case, the opportunity cost of producing the good in the United States is higher than in another country. Thus the United States will import the product from the other country.

Topic: Comparative Advantage and Absolute Advantage

Skill: Conceptual

AACSB: Written and oral communication

21) The United States has an absolute advantage in producing sugar over all of the other sugar producing countries. Does this fact mean that we should not import any sugar from the other countries?

Answer: Having an absolute advantage doesn't mean that the United States should engage in the production of sugar. If the opportunity cost of sugar in the United States is higher than in the other countries, then the other countries will have the comparative advantage. The countries with the comparative advantage are the ones that should do the producing. Quite likely these other nations have the comparative advantage and so it would be good policy for the United States to import sugar from these nations.

Topic: Comparative Advantage and Absolute Advantage

Skill: Conceptual

AACSB: Written and oral communication

22) Why does it make sense for economies to specialize according to comparative advantage and trade?

Answer: A person has a comparative advantage in an activity that they can perform at a lower opportunity cost than other people. By participating in the activity in which they have a comparative advantage, less is given up. Because resources are scarce, more can be produced with available resources when less is given up. And, by trading people can consume more than just what they produce.

Topic: Gains from Trade

Skill: Conceptual

AACSB: Written and oral communication

23) "The United States is more productive in most activities than are most of other countries because it has an absolute advantage in the production of most goods and services. Therefore we should restrict international trade as it only benefits other countries at the expense of the United States." Comment on this statement.

Answer: The United States may be more productive than other countries in producing most goods and services so that it has an absolute advantage in most products, but it still has a *comparative* disadvantage in many goods and services. Thus the United States can gain from buying these goods and services from other countries and selling to these other countries the goods and services in which the United States has a comparative advantage to them. For example, the United States can have an absolute advantage over China in producing both cars and grain, but if China has a comparative advantage in grain, it can produce grain with a lower opportunity cost, that is, fewer cars given up to get a thousand tons of grain, than can the United States. In this case, the United States can benefit by importing Chinese grain and paying for it with fewer cars than the United States would have to give up if the same amount of grain was produced domestically.

Topic: Gains from Trade

Skill: Conceptual

AACSB: Written and oral communication

24) How do property rights help organize production and trade?

Answer: Property rights are necessary in order for people to specialize. If people specialize in production, they will want to consume more than just what they produce. Without property rights, people would worry that someone else would take their production, leaving them with little or nothing to trade for the other goods and services they want to consume.

Topic: The Market Economy

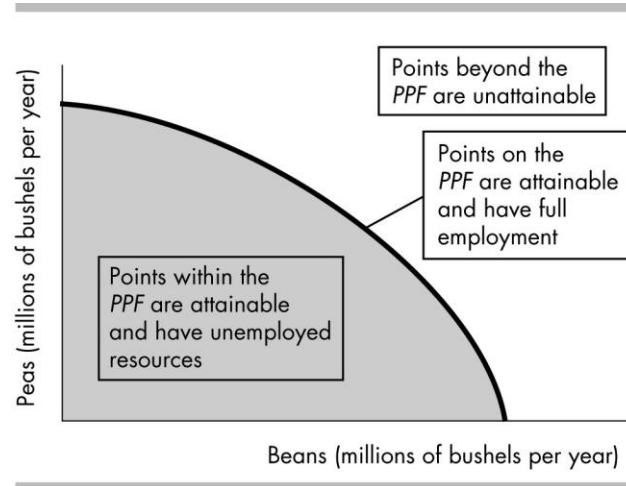
Skill: Conceptual

AACSB: Written and oral communication

## 8 Numeric and Graphing Questions

1) Draw a production possibilities frontier between beans and peas. Label the unattainable points, the attainable points with fully employed resources, and the attainable points with unemployed resources.

Answer:

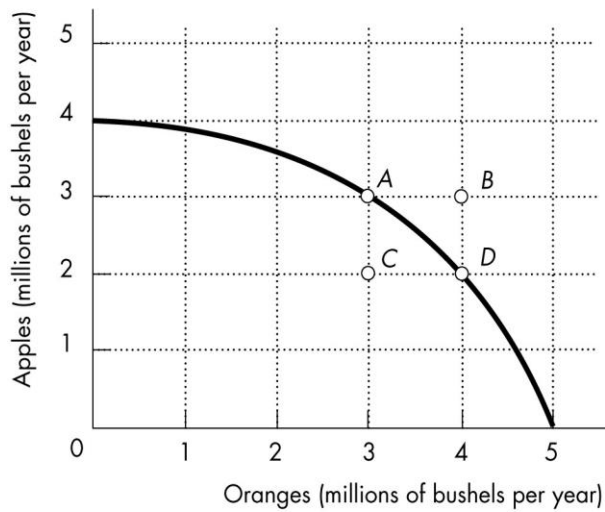


The production possibilities frontier, with the points labeled, is above. Any point beyond the production possibilities frontier is unattainable. Any point on the production possibilities frontier is attainable and resources are fully employed. Finally, any point within the production possibilities frontier is attainable and has unemployed resources.

Topic: Production Possibilities Frontier

Skill: Conceptual

AACSB: Analytical thinking



2) The figure above shows a nation's production possibilities frontier for apples and oranges.

- a) What combination of goods is represented by point *A*?
- b) What combination of goods is represented by point *B*?
- c) Which point represents an unattainable combination of goods?

Answer:

- a) 3 million bushels of apples and 3 million bushels of oranges
- b) 3 million bushels of apples and 4 million bushels of oranges
- c) Point *B* is an unattainable point.

Topic: Production Possibilities Frontier

Skill: Conceptual

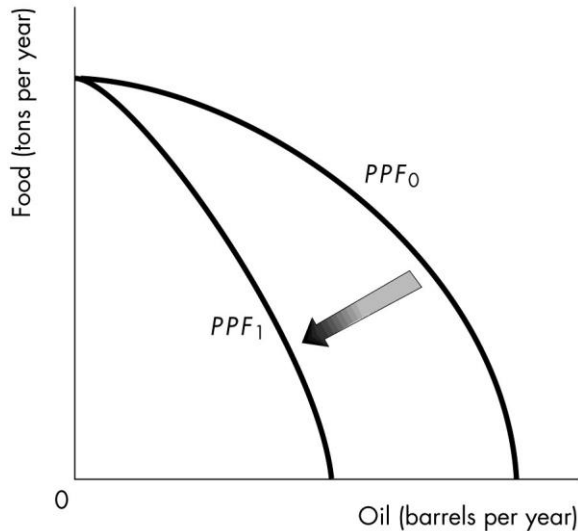
AACSB: Analytical thinking



3) Before the first Gulf War in 1991, Kuwait had the capacity to produce a certain amount of oil from its oil wells. After the war, it found that capacity greatly diminished because the oil wells had been set on fire. Draw Kuwait's *PPF* before and after the war, assuming that the only two goods produced are oil and food. Further assume that setting the oil wells on fire did not affect Kuwait's ability to produce food. Explain why the *PPF* before the war is different from the *PPF* after the war.

Answer:

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When a *PPF* is drawn, we draw it for a fixed amount of natural resources, along with fixed amounts of the other factors of production such as labor, capital, etc. Fire reduced Kuwait's natural resources temporarily, so the *PPF* after the war shifted inwards. However, because setting the oil wells on fire did not affect Kuwait's ability to produce food, the maximum amount of food production, the point where the *PPF* intersects the vertical axis, did not change.

Topic: Production Possibilities Frontier

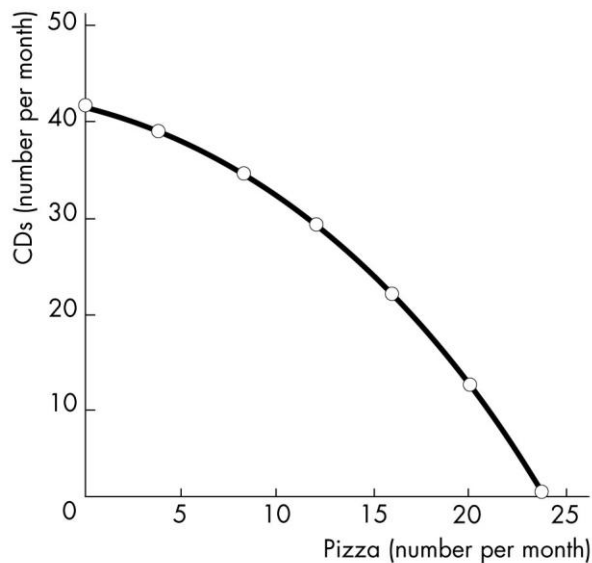
Skill: Conceptual

AACSB: Analytical thinking

Production point	Pizza produced		CDs produced
A	0	and	42
B	4	and	40
C	8	and	36
D	12	and	30
E	16	and	22
F	20	and	12
G	24	and	0

4) The table above lists seven points on the production possibilities frontier for pizza and CDs. Graph the *PPF*. What is the opportunity cost of producing the first four pizzas? What is the opportunity cost of producing the 10th pizza. What is the opportunity cost of producing the first 12 CDs? What is the opportunity cost of producing the 26th CD?

Answer:



The *PPF* graph is shown above. The opportunity cost of the first four pizzas is 2 CDs per pizza. The 10th pizza is the midpoint between 8 and 12 pizzas. The opportunity cost of gaining 4 additional pizzas by producing 12 pizzas instead of 8 pizzas is 6 CDs given up, so the opportunity cost of an additional pizza is  $6 \div 4 = 1.5$  CDs per pizza. The opportunity cost of the first 12 CDs is 4 pizzas. The 26th CD is the midpoint between 22 and 30 CDs. The opportunity cost of gaining 8 CDs by producing 30 CDs instead of 22 CDs is 4 pizzas given up, so the opportunity cost of an additional CD is  $4 \div 8 = 0.5$  pizzas per CD.

Topic: Production Possibilities Frontier

Skill: Analytical

AACSB: Analytical thinking

Production point	Milk (gallons)		Shirts (number)
<i>A</i>	0	and	100
<i>B</i>	2	and	90
<i>C</i>	4	and	70
<i>D</i>	6	and	40
<i>E</i>	8	and	0

5) A (very, very small) country produces milk and shirts and its production possibilities frontier is in the table above. The nation is currently producing at point *B*. What is the opportunity cost of two additional gallons of milk? At point *C*? At point *D*? What do your results show?

Answer: At point *B*, the opportunity cost of 2 additional gallons of milk is 20 shirts per gallon of milk. At point *C*, the opportunity cost of 2 additional gallons of milk is 30 shirts per gallon of milk. At point *D*, the opportunity cost of 2 additional gallons of milk is 40 shirts per gallon of milk. The opportunity cost of 2 additional gallons of milk increases as more milk is produced.

Topic: Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

Production point	Pages typed		Web pages created
<i>A</i>	0	and	4
<i>B</i>	40	and	3
<i>C</i>	70	and	2
<i>D</i>	90	and	1
<i>E</i>	100	and	0

6) Jean can either type her term paper or create Web pages during the limited time she has available. The table above shows her *PPF*.

a) Can Jean type 90 pages and create 2 Web pages?

b) Use the above numbers to calculate the opportunity cost of a typed page as she increases her time typing and decreases time creating a Web page.

Answer:

a) Jean cannot type 90 pages and create 2 Web pages because, as row *D* shows, that combination is beyond her *PPF*.

Movement from	Increase in typed pages	Decrease in Web pages	Opportunity cost
<i>A to B</i>	40	1	1/40
<i>B to C</i>	30	1	1/30
<i>C to D</i>	20	1	1/20
<i>D to E</i>	10	1	1/10

b) The opportunity cost is the ratio of the decrease in the number of Web pages divided by the increase in the number of typed pages. The table above gives the opportunity cost for typed pages.

Topic: Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

Production point	Wheat (bushels)		Soybeans (bushels)
<i>A</i>	1,500	and	0
<i>B</i>	1,000	and	2,250
<i>C</i>	500	and	3,500
<i>D</i>	0	and	4,000

7) The table above gives the production possibilities frontier for a nation that produces wheat and soybeans. Use the information in that table to complete the table below, which has in it the opportunity costs of moving from one production point to another. Do not forget to note the units of the opportunity costs.

Movement from	Opportunity cost	Movement from	Opportunity cost
<i>A to B</i>		<i>D to C</i>	
<i>B to C</i>		<i>C to B</i>	
<i>C to D</i>		<i>B to A</i>	

Answer:

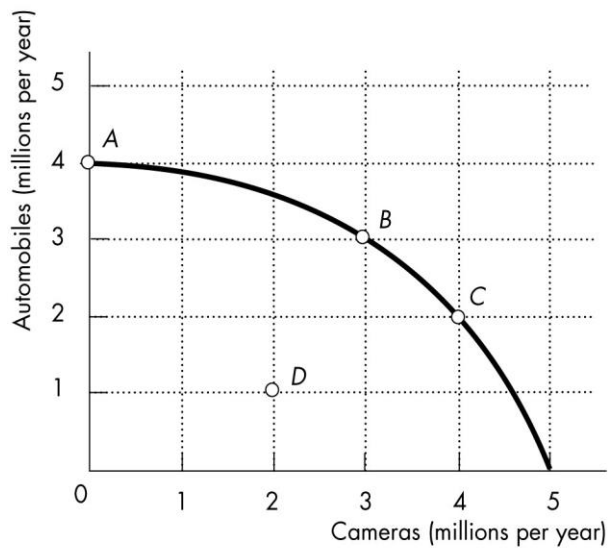
Movement from	Opportunity cost (bushels of soybeans per bushels of wheat)	Movement from	Opportunity cost (bushels of wheat per bushels of soybeans)
<i>A to B</i>	0.22	<i>D to C</i>	1.00
<i>B to C</i>	0.40	<i>C to B</i>	2.50

The table above gives the opportunity costs. The units of the opportunity costs are in the column headings.

Topic: Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking



- 8) The figure above represents the production possibilities frontier for a country.
- The nation is currently producing at point B and wants to move to point C. What is the opportunity cost of the move?
  - The nation is currently producing at point B and wants to move to point A. What is the opportunity cost of the move?

Answer:

- By moving from point B to point C, the production of automobiles decreases by 1 million, from 3 million to 2 million. The 1 million decrease in automobiles is the opportunity cost of the movement.
- By moving from point B to point A, the production of cameras decreases by 3 million, from 3 million to 0 million. The 3 million decrease in cameras is the opportunity cost of the movement.

Topic: Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

Production point	Beef (pounds)		Wheat (bushels)
<i>A</i>	0	and	9
<i>B</i>	2	and	7
<i>C</i>	4	and	4
<i>D</i>	6	and	0

9) The table above presents the production possibilities of Farmer Brown. Use these data to calculate Farmer Brown's opportunity cost of additional beef as Farmer Brown moves from point *A* to *B* to *C* to *D*. Also use the data to calculate Farmer Brown's opportunity cost of additional wheat as Farmer Brown moves from point *D* to *C* to *B* to *A*. Based on these costs, does Farmer Brown use resources that are more productive in one activity than the other? Explain your answer.

Answer: The opportunity cost of a pound of beef is 1 bushel of wheat per pound of beef between points *A* and *B*,  $1\frac{1}{2}$  bushels of wheat per pound of beef between points *B* and *C*, and 2 bushels of wheat per pound of beef between points *C* and *D*. The opportunity cost of a bushel of wheat is  $\frac{1}{2}$  pound of beef per bushel of wheat between points *D* and *C*,  $\frac{2}{3}$  pound of beef per bushel of wheat between points *C* and *B*, and 1 pound of beef per bushel of wheat between points *B* and *A*. Farmer Brown does use resources that are more productive in one activity than the other because the opportunity costs of producing beef and wheat increase as more beef and wheat are produced. If the resources were equally productive in both activities, the opportunity costs would be constant.

Topic: Increasing Opportunity Cost

Skill: Analytical

AACSB: Analytical thinking

Production point	Fish (pounds)		Berries (pounds)
A	0	and	50
B	1	and	45
C	2	and	35
D	3	and	20
E	4	and	0

10) The table above shows the production possibilities frontier for the nation of Isolanda.

- Find the marginal cost of a pound of fish using the above PPF.
- How does the marginal cost of a pound of fish change as more fish are caught?

Answer:

Fish (pounds)	Marginal cost (pounds of berries)
0.5	5
1.5	10
2.5	15
3.5	20

a) The table above shows the marginal cost of a pound of fish. Remember that marginal cost is calculated at the mid-point, that is, midway between the two production possibilities. For instance, moving from production point A to production point B has an opportunity cost of 5 pounds of berries per pound of fish. Because this movement gains 1 pound of fish, the marginal cost is 5 pounds of berries. We then attribute this marginal cost to the point midway between points A and B, which is 0.5 pounds of fish per pound of berries.

b) As more fish are caught, the marginal cost of a fish increases.

Topic: Marginal Cost

Skill: Analytical

AACSB: Analytical thinking

11) At the current point of production on a nation's production possibilities frontier, the marginal benefit of a slice of pizza is 500 tacos per slice of pizza while the marginal cost of producing a slice of pizza is 750 tacos per slice of pizza. To be allocatively efficient, what should be done?

Answer: The marginal benefit of a slice of pizza is less than its marginal cost. Therefore to be allocatively efficient, less pizza and more tacos should be produced.

Topic: Allocative Efficiency

Skill: Conceptual

AACSB: Analytical thinking



Quantity (millions of bushes of apples)	Marginal benefit (oranges per bushel)	Marginal Cost (oranges per bushel)
5	10	1
10	8	3
15	6	6
20	4	9
25	2	12

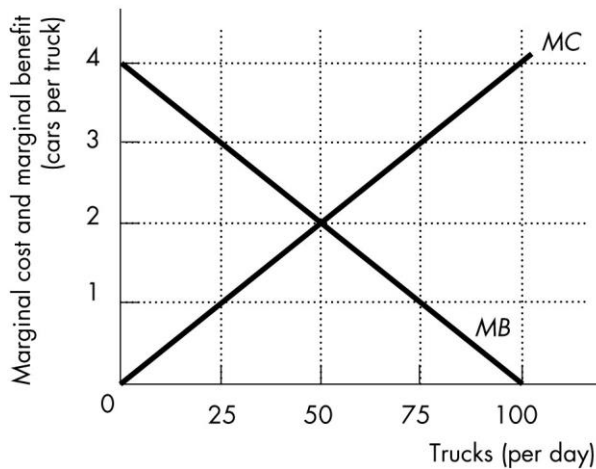
12) Using the values for the marginal benefit and the marginal cost of a bushel of apples given in the table above, what is the allocatively efficient quantity of apples? Suppose 10 million bushels of apples are produced. Should the quantity be increased or decreased? What if 20 million bushels are produced; should the quantity be increased or decreased?

Answer: The allocatively efficient quantity of apples is 15 million bushels because this is the quantity at which the marginal benefit equals the marginal cost. If 10 million bushels of apples are produced, the marginal benefit exceeds the marginal cost, so more apples should be produced. If 20 million bushels of apples are produced, the marginal cost exceeds the marginal benefit and so fewer apples should be produced.

Topic: Allocative Efficiency

Skill: Analytical

AACSB: Analytical thinking



13) Suppose a factory can be designed to produce either trucks or cars. The figure above shows the marginal cost and marginal benefit of producing trucks in terms of the forgone cars.

- What is the marginal benefit of the 25th truck?
- What is the marginal cost of the 25th truck?
- Should the 25th truck be produced? Why or why not.
- What is the marginal benefit of the 75th truck?
- What is the marginal cost of the 75th truck?
- Should the 75th truck be produced? Why or why not?
- What is the allocatively efficient quantity of trucks?

Answer:

- 3 cars per truck
- 1 car per truck
- This truck should be produced because people value the 25th truck at 3 cars per truck, but it only costs 1 car per truck to make it.
- 1 car per truck
- 3 cars per truck
- This truck should *not* be produced because people value the 75th truck at 1 car per truck, but it costs 3 cars per truck to make it.
- 50 trucks is the allocatively efficient quantity of trucks.

Topic: Allocative Efficiency

Skill: Analytical

AACSB: Analytical thinking

China's production in 1 day		Pakistan's production in 1 day	
Cloth	8	Cloth	4
Cheese	16	Cheese	12

14) The table above shows the amounts of cloth and cheese that China and Pakistan can produce in an hour. Which country has the comparative advantage in cloth and which country has the comparative advantage in cheese?

Answer: In China, to produce 8 cloths has an opportunity cost of 16 cheeses, so the opportunity cost of 1 cloth is  $(16 \text{ cheese}) / (8 \text{ cloths}) = 2$  cheeses per cloth. In Pakistan, to produce 4 cloths has an opportunity cost of 12 cheeses. Hence the opportunity cost of 1 cloth is  $(12 \text{ cheeses}) / (4 \text{ cloths})$  or 3 cheeses per cloth. Because China's opportunity cost of a cloth is lower, China has the comparative advantage in producing cloth.

In China, to produce 16 cheeses has an opportunity cost of 8 cloths, so the opportunity cost of 1 cheese is  $(8 \text{ cloths}) / (16 \text{ cheeses}) = 1/2$  cloth per cheese. In Pakistan, to produce 12 cheeses has an opportunity cost of 4 cloths. Hence the opportunity cost of 1 cheese is  $(4 \text{ cloths}) / (12 \text{ cheeses})$  or  $1/3$  cloth per cheese. Because Pakistan's opportunity cost of a cheese is lower, Pakistan has the comparative advantage in producing cheese.

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

Omar's production in 1 day		John's production in 1 day	
Computers fixed	12	Computers fixed	4
Lines of code	800	Lines of code	200

15) Omar and John can fix computers or write computer programs. The table above shows the number of computers they can fix and the lines of code they can write in a day.

- Who, if anyone, has the absolute advantage?
- Who has the comparative advantage in fixing computers? Why?
- Who has the comparative advantage in writing programs? Why?

Answer:

- Omar has an absolute advantage in fixing computers and writing code because he can fix 12 per day compared to John who can fix only 4 per day, and can write 800 lines of code per day compared to John who can write only 200 lines a day.
- John has the comparative advantage in fixing computers. He has the comparative advantage because his opportunity cost of fixing one computer is 50 lines of computer code. Omar does not have a comparative advantage in fixing computers because his opportunity cost of fixing a computer is higher at 66.7 lines of code.
- Omar has the comparative advantage in writing programs. His opportunity cost of writing one line of code is .015 of a computer fixed. John does not have the comparative advantage in writing programs because his opportunity cost of writing one line of code is 0.02 computers fixed. (Alternatively, to write 1 line of code costs Omar the opportunity to repair 1.5 percent of a computer and costs John the opportunity to repair 2.0 percent of a computer.)

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

16) Jake takes 40 minutes to fry a chicken and 10 minutes to toast a slice of bread. His brother Elwood takes 60 minutes to fry a chicken and 4 minutes to toast a slice of bread. Calculate each brother's opportunity cost. Who has a comparative advantage in which activity? Explain. Will the brothers gain if they specialize?

Answer: Jake can spend an hour to fry 1.5 chickens or toast 6 slices of bread, which means 1 chicken costs him  $6 \text{ slices of bread} \div 1.5 \text{ chickens} = 4 \text{ slices of bread per chicken}$  while 1 slice of bread costs him  $1.5 \text{ chickens} \div 6 \text{ slices of bread} = 0.25 \text{ of a chicken per slice of bread}$ . Elwood spends an hour to fry 1 chicken or toast 15 slices of bread, which means 1 chicken costs him  $15 \text{ slices of bread} \div 1 \text{ chicken} = 15 \text{ slices of bread per chicken}$  while 1 slice of bread costs him  $1 \text{ chicken} \div 15 \text{ slices of bread} = 0.067 \text{ of a chicken per slice of bread}$ . Thus, Jake has a comparative advantage (a lower opportunity cost) in frying chickens, whereas Elwood has a comparative advantage in toasting bread. The brothers can gain from specialization. For example, suppose each of them spends 2 hours to fry chickens and 2 hours to toast bread. Then, Jake will produce 3 chickens and 12 slices of bread and Elwood will produce 2 chickens and 30 slices of bread, so that together they will produce 5 chickens and 42 slices of bread. But, if Jake specializes in his comparative advantage, frying chickens and spends all 4 hours frying chickens, he will produce 6 chickens. And if Elwood specializes in his comparative advantage, toasting bread, and spends all 4 hours toasting bread, he will produce 60 slices of bread. Then, together they will produce 6 chickens and 60 slices of bread. The gain from specialization is 1 extra chicken and 18 extra slices of bread.

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

17) Mary takes 4 minutes to make a sandwich and 6 minutes to mix a cocktail. Her sister Ash takes 4 minutes to make a sandwich and 4 minutes to mix a cocktail. Calculate each sister's opportunity cost. Which of the two sisters has an absolute advantage in making sandwiches? In mixing cocktails? Which of the two has a comparative advantage in making sandwiches? In mixing cocktails?

Answer: Mary can spend an hour to make 15 sandwiches or mix 10 cocktails, which means 1 sandwich costs her  $10 \text{ cocktails} \div 15 \text{ sandwiches} = 0.67 \text{ of a cocktail per sandwich}$  while 1 cocktail costs her  $15 \text{ sandwiches} \div 10 \text{ cocktails} = 1.5 \text{ sandwiches per cocktail}$ . Ash can spend an hour to make 15 sandwiches or mix 15 cocktails, which means 1 sandwich costs her  $15 \text{ cocktails} \div 15 \text{ sandwiches} = 1 \text{ cocktail per sandwich}$  and 1 cocktail costs 1 sandwich per cocktail. The sisters are equally productive in sandwiches (15 sandwiches per hour) and therefore neither of them has an absolute advantage in sandwiches. But Ash has an absolute advantage in cocktails. She can mix 15 cocktails per hour while Mary can only mix 10. To see the sisters' comparative advantage we compare their opportunity costs. Mary's opportunity cost of a sandwich (0.67 of a cocktail per sandwich) is lower than Ash's (1 cocktail per sandwich), so Mary has a comparative advantage in sandwiches. Ash's opportunity cost of a cocktail (1 sandwich per cocktail) is lower than Mary's (1.5 sandwiches per cocktail), so Ash has a comparative advantage in cocktails.

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

Nation A's production in 1 day		Nation B's production in 1 day	
Computers	100	Computers	120
Software	140	Software	150

18) Two nations can produce computers and software in the amounts given in the table above. Does either nation have an absolute advantage in producing the products? Which nation has a comparative advantage in computers? Which nation has a comparative advantage in software? Explain your answers.

Answer: Nation B has an absolute advantage in producing both goods because it can produce more of both in one day than can Nation A. Nation B has the comparative advantage in computer production and Nation A has the comparative advantage in software. The nation with the lowest opportunity cost of producing a good has the comparative advantage in that good. In Nation A, to produce 100 computers has the opportunity cost of 140 units of software forgone, so the opportunity cost of 1 computer equals  $(140 \text{ units of software}) / (100 \text{ computers}) = 1.4$  units of software per computer. In Nation B, similar calculations show that the opportunity cost for a computer is 1.25 units of software per computer. Nation B's opportunity cost is lower, so Nation B has the comparative advantage in computers. For software, in Nation A the opportunity cost of a unit of software is  $(100 \text{ computers}) / (140 \text{ units of software}) = 0.71$  computers per unit of software while in Nation B the opportunity cost is  $(120 \text{ computers}) / (150 \text{ units of software}) = 0.80$  computers per unit of software. Nation A's opportunity cost is lower, so Nation A has the comparative advantage in software.

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

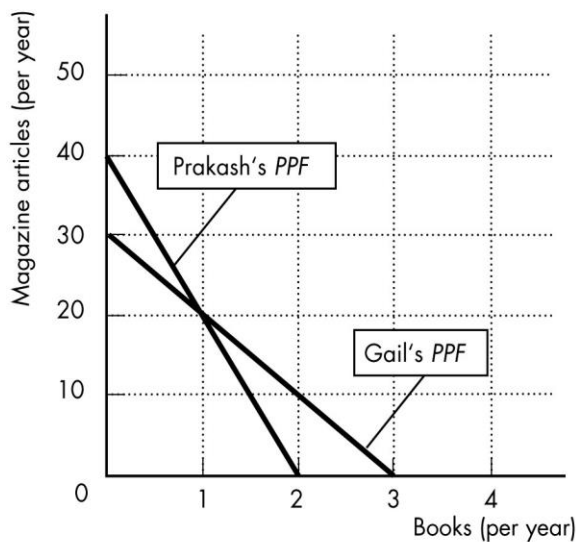
19) Japan can use all of its resources to produce 100 videos or 400 shoes. China can use all of its resources to produce 25 videos or 200 shoes. Which nation has the comparative advantage in shoes and which nation has the comparative advantage in videos?

Answer: In Japan, the opportunity cost of producing a video is 4 shoes and in China it is 8 shoes. Therefore Japan has the comparative advantage in producing videos because its opportunity cost is lower. In Japan, the opportunity cost of producing a shoe is  $1/4$  of a video and in China the opportunity cost of producing a shoe is  $1/8$  of a video. China has the comparative advantage in producing shoes because its opportunity cost is lower.

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking



20) The figure above shows Prakash's and Gail's production possibilities frontiers for writing books and magazine articles.

- What is Prakash's opportunity cost of a book? What is Gail's opportunity cost? Who has the comparative advantage in writing books?
- Who has the comparative advantage in writing magazine articles?
- According to their comparative advantages, who should write books and who should write magazine articles?

Answer:

- In a year, Prakash can write 2 books or 40 magazine articles. Hence the opportunity cost of 1 book is  $(40 \text{ magazine articles}) \div (2 \text{ books}) = 20$  magazine articles per book. In a year, Gail can write 3 books or 30 magazine articles. Hence the opportunity cost of 1 book is  $(30 \text{ magazine articles}) \div (3 \text{ books}) = 10$  magazine articles per book. Gail's opportunity cost of writing books is lower than Prakash's, so Gail has the comparative advantage in writing books.
- Prakash has the comparative advantage in writing magazine articles.
- Gail has the comparative advantage in writing books, so she should write books. Prakash has the comparative advantage in writing magazine articles, so he should write magazine articles.

Topic: Comparative Advantage

Skill: Analytical

AACSB: Analytical thinking

## 9 True or False

1) Points outside the production possibilities frontier illustrate production points that cannot be attained.

Answer: TRUE

Topic: Production Possibilities Frontier

Skill: Recognition

AACSB: Reflective thinking

2) If a country operates on its *PPF*, it achieves production efficiency.

Answer: TRUE

Topic: Production Possibilities and Opportunity Costs

Skill: Recognition

AACSB: Reflective thinking

3) Moving downward along a *PPF*, the opportunity cost of another unit of the good measured along the horizontal axis decreases.

Answer: FALSE

Topic: Production Possibilities and Opportunity Costs

Skill: Conceptual

AACSB: Reflective thinking

4) We have achieved production efficiency if we can produce more of one good without producing less of some other good.

Answer: FALSE

Topic: Production Efficiency

Skill: Conceptual

AACSB: Reflective thinking

5) Each point on the production possibilities frontier achieves allocative efficiency.

Answer: FALSE

Topic: Allocative Efficiency

Skill: Conceptual

AACSB: Reflective thinking

6) We are using resources efficiently if we can produce more of one good without producing less of some other good that we value more highly.

Answer: FALSE

Topic: Using Resources Efficiently

Skill: Conceptual

AACSB: Reflective thinking

7) The more we have of a good or service, the smaller is its marginal benefit and the less we are willing to pay for an additional unit of it.

Answer: TRUE

Topic: Using Resources Efficiently

Skill: Conceptual

AACSB: Reflective thinking

8) As long as the marginal benefit from a good is greater than its marginal cost, an economy is operating efficiently.

Answer: FALSE

Topic: Using Resources Efficiently

Skill: Conceptual

AACSB: Reflective thinking



9) If marginal benefit is greater than marginal cost for the production of cars, to reach the allocative efficient quantity of cars, the production of cars must be increased.

Answer: TRUE

Topic: Using Resources Efficiently

Skill: Conceptual

AACSB: Reflective thinking

10) When a nation is producing the allocatively efficient quantity of a product, the marginal benefit of producing the good equals the marginal cost of producing that good.

Answer: TRUE

Topic: Using Resources Efficiently

Skill: Conceptual

AACSB: Reflective thinking

11) As long as technology increases, economic growth is free.

Answer: FALSE

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

12) Over the past several decades, the United States has devoted a greater fraction of its resources to consumption than Hong Kong, which is why the U.S. economy grew faster than Hong Kong's economy.

Answer: FALSE

Topic: Economic Growth

Skill: Recognition

AACSB: Reflective thinking

13) If Hong Kong continues to devote more resources to accumulating capital than the United States, Hong Kong will continue to grow more rapidly than the United States.

Answer: TRUE

Topic: Economic Growth

Skill: Conceptual

AACSB: Reflective thinking

14) A country has a comparative advantage in the production of a good if its opportunity cost is lower compared to another country.

Answer: TRUE

Topic: Comparative Advantage

Skill: Recognition

AACSB: Reflective thinking

15) Specialization and trade allow countries to consume beyond their *PPFs*.

Answer: TRUE

Topic: Gains from Trade

Skill: Recognition

AACSB: Reflective thinking

16) If two countries specialize in the production of goods in which they have a comparative advantage, they can experience gains from trade.

Answer: TRUE

Topic: Gains from Trade

Skill: Conceptual

AACSB: Reflective thinking

17) Property rights facilitate the development of trade.

Answer: TRUE

Topic: The Market Economy

Skill: Conceptual

AACSB: Reflective thinking

18) A circular flow diagram shows the flows from the goods and resources markets.

Answer: TRUE

Topic: The Market Economy

Skill: Recognition

AACSB: Reflective thinking

19) Households are buyers in factor markets and sellers in goods markets.

Answer: FALSE

Topic: The Market Economy

Skill: Recognition

AACSB: Reflective thinking

20) In the United States, the government coordinates most of the economic activity.

Answer: FALSE

Topic: The Market Economy

Skill: Recognition

AACSB: Reflective thinking

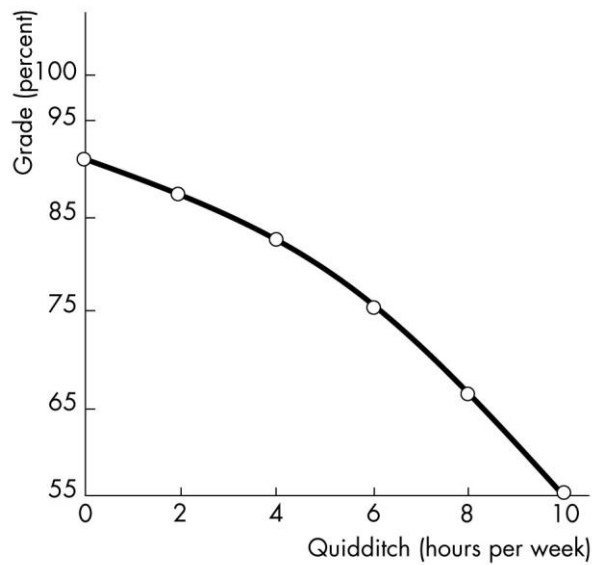
## 10 Extended Problems

Extra study time (hours per week)	Quidditch (hours per week)	Harry's grade (points)
10	0	90
8	2	87
6	4	82
4	6	75
2	8	66
0	10	55

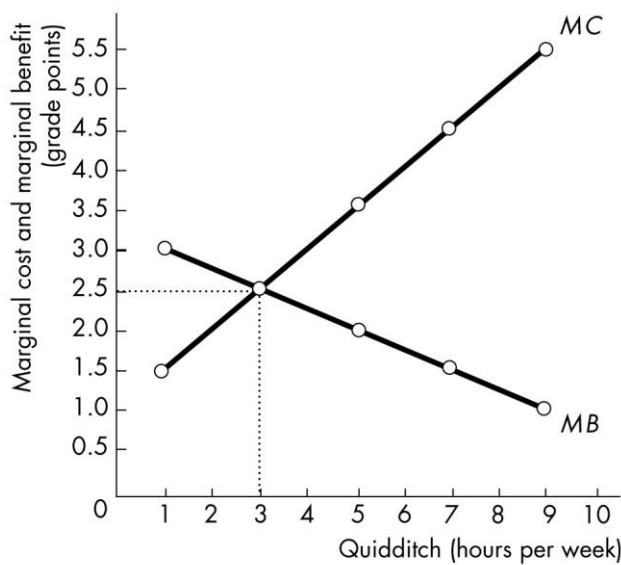
Quidditch (hours per week)	Marginal benefit of an extra hour (points)
1	3.0
3	2.5
5	2.0
7	1.5
9	1.0

- 1) Harry usually spends 10 hours a week playing Quidditch. However, his Defense Against the Dark Arts exam is coming and he needs more time to study for the exam. If he does not study at all, the lowest grade he will receive is 55. But Harry realizes that this grade is unacceptable and so he has to give up some of his Quidditch time. But how much? He asks his friend Hermione, who is very good at Magical Economics, to help him figure this out. Together, they come up with the schedules of Harry's possibilities and values in the tables above. Then Hermione quickly finds the solution. But Harry still looks puzzled. Help Hermione to explain her solution to Harry.
- Draw Harry's production possibilities frontier with the Quidditch hours on the horizontal axis and Harry's grade, starting at 55, on the vertical axis.
  - What is the opportunity cost of the first two hours of Quidditch? What is the marginal cost of the 5th hour?
  - What is Harry's opportunity cost of raising his grade from 82 points to 87 points?
  - Draw Harry's marginal cost of playing Quidditch curve. What happens to the marginal cost if Harry spends more time playing Quidditch?
  - Draw Harry's marginal benefit from playing Quidditch curve. Describe the relationship between Harry's time spent playing Quidditch and the marginal benefit from playing Quidditch.
  - For how many extra hours did Hermione recommend Harry to study? Why? If Harry follows her advice, what grade will he expect? What do you think Hermione said when Harry asked why he should not spend more time playing Quidditch?

Answer:



- The figure above shows Harry's production possibilities frontier.
- Harry's opportunity cost of the first two hours of Quidditch is three points off his grade. According to the *PPF*, if Harry does not play Quidditch at all, the best grade he can get is 90 points, but if he plays Quidditch two hours a week, his grade falls to 87 points. So Harry gives up three points of his grade to get his first two hours of Quidditch. When Harry increases his Quidditch time from 4 hours to 6 hours, he gives up 7 points of his grade, which means each additional hour costs him 3.5 points. So the marginal cost of the 5th hour is 3.5 points.
- If Harry wants to raise his grade from 82 points to 87 points, he must give up 2 hours of Quidditch by playing 2 hours per week instead of 4 hours. So the opportunity cost of these 5 extra points is 2 hours of Quidditch.



d) To draw Harry's marginal cost curve, we calculate the marginal costs of the 1st, 3rd, 7th, and 9th hours of Quidditch the same way we calculated the marginal cost of the 5th hour. The marginal cost curve is shown in the figure above as *MC*. Harry's marginal cost of playing Quidditch increases as he spends more time playing.

e) Harry's marginal benefit from playing Quidditch is measured by the value of an extra hour of Quidditch in terms of Harry's grade. The marginal benefit curve is graphed in the figure above using the data in the second table. The relationship between Harry's time spent to play Quidditch and the marginal benefit from playing is an inverse relationship.

f) Hermione recommended to Harry that he study 7 extra hours a week, which leaves him only 3 hours per week to play Quidditch. The figure above shows that if Harry plays Quidditch 3 hours a week, the marginal cost of playing Quidditch equals the marginal benefit (Hermione calls this allocative efficiency). If Harry follows Hermione's advice, his grade will be 84.5 points. When Harry asked why he should not spend more time playing Quidditch, Hermione (who is a magical economist) probably said: "If you play for one more hour, your marginal cost will be 3 points off your grade, whereas your marginal benefit from this hour is only 2.25 points. I mean, the value that you get from your fourth hour of Quidditch is lower than the cost you pay for it, so you are worse off by spending more than three hours a week on Quidditch. This isn't magic, it's pure economics. Only the greatest wizards truly understand economics..."

Topic: Allocative Efficiency

Skill: Analytical

AACSB: Analytical thinking

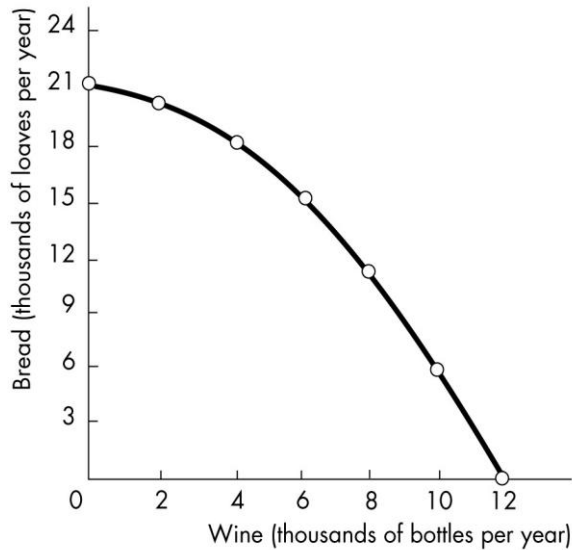
Combination	Wine (thousands of bottles per year)	Bread (thousands of loaves per year)
<i>A</i>	0	21
<i>B</i>	2	20
<i>C</i>	4	18
<i>D</i>	6	15
<i>E</i>	8	11
<i>F</i>	10	6
<i>G</i>	12	0

Wine (thousands of bottles per year)	Willingness to pay (loaves of bread per bottle of wine)
1	2.5
3	2.0
5	1.5
7	1.0
9	0.5

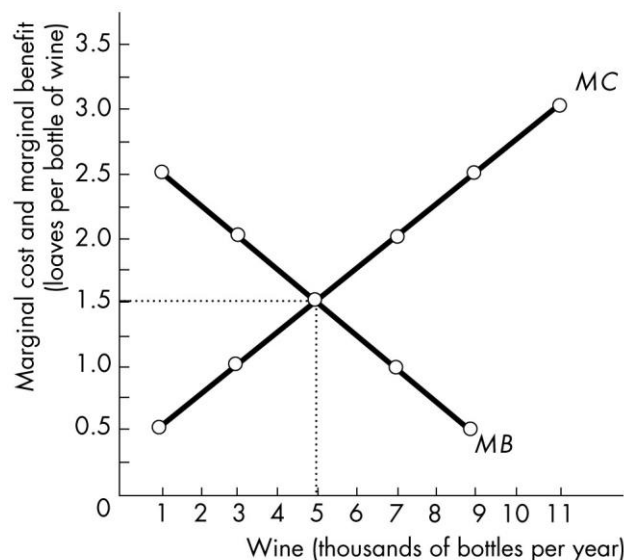
2) The Hobbits of the Shire are trying to decide how much bread and how much wine to produce. They ask you to be their economic consultant and give you the information in the first table above about different combinations of wine and bread that they can produce if they are fully employed and doing their best. The Hobbits also give you the information in the second table above about their willingness to pay for wine depending on how much wine they already have. To help the Hobbits solve their problem:

- Draw the Shire's production possibilities frontier. Put wine on the horizontal axis.
- What is the opportunity cost of the first two thousand bottles of wine? What is the marginal cost of the 3000th bottle of wine? What is the marginal cost of the 3,000th loaf of bread?
- Draw the marginal cost of wine curve. What happens to the marginal cost if production of wine increases? Why?
- Draw the marginal benefit from wine curve on the same figure on which you put the marginal cost curve. Describe the relationship between the quantity of wine produced and the marginal benefit from wine.
- What combination of bread and wine will you recommend the Hobbits to produce? Why? Explain to the Hobbits why they would be worse off by producing a different combination of bread and wine.

Answer:



- a) The figure above shows the Shire's production possibilities frontier.
- b) As the *PPF* shows, if the Hobbits produce no wine, they can produce 21,000 loaves of bread, but if they want to produce 2,000 bottles of wine, they can only produce 20,000 loaves of bread. The 1,000 loaves of bread that they have to give up to produce 2,000 bottles of wine is their opportunity cost of producing the first 2,000 bottles of wine, so the opportunity cost of the first 2,000 bottles of wine is 1,000 loaves of bread. When the Hobbits increase their production of wine from 2,000 to 4,000, they give up 2,000 loaves of bread, which means each additional bottle of wine costs them 1 loaf of bread. The 3,000th bottle of wine is midway between 2,000 and 4,000, so the marginal cost of the 3,000th bottle is 1 loaf of bread. Similarly, when the Hobbits increase their production of bread from zero to 6,000, they give up 2,000 bottles of wine, or  $\frac{1}{3}$  of a bottle per loaf. The 3,000th loaf is in the middle of 0 and 6,000 loaves, so the marginal cost of the 3,000th loaf of bread is  $\frac{1}{3}$  of a bottle of wine.



c) To draw the marginal cost curve, we calculate the marginal costs of the 1,000th, 5,000th, 7,000th, 9,000th, and 11,000th bottles of wine the same way we calculated the marginal cost of the 3,000th bottle. The marginal cost curve is shown in the figure above as the curve labeled *MC*. The marginal cost of wine is increasing because all Hobbits are not equally productive in both activities. Some Hobbits are good at producing bread but not very good at producing wine. So if they stop producing bread and start to produce wine instead, the Shire will lose a large quantity of bread for a small quantity of additional wine, which means the cost of an additional bottle of wine in terms of bread, or the marginal cost of wine, will increase.

d) The marginal benefit of wine is measured by what the Hobbits are willing to pay for an additional bottle. So, the marginal benefit curve can be graphed using the willingness to pay data in the table and is the curve in the figure labeled *MB*. The relationship between the quantity of wine produced and the marginal benefit from wine is an inverse relationship. If wine is relatively scarce, the Hobbits place a high value on it. But if they already have plenty of wine, they are not likely to be willing to pay a high price to get an extra bottle.

e) You recommend that the Hobbits produce 5,000 bottles of wine and 16,500 loaves of bread. The figure shows that if the Shire produces 5,000 bottles, the marginal cost of wine equals the marginal benefit, and the Hobbits will achieve allocative efficiency. If the Hobbits produce 5,000 bottles of wine, they will have just enough resources (be on their *PPF*) to produce 16,500 loaves of bread. If the Hobbits produce a different combination of these two goods, they will be worse off. For example, if they produce 4,000 bottles of wine and 18,000 loaves of bread, the marginal benefit from wine is 1.75 loaves of bread while the marginal cost of wine is only 1.25 loaves. In this case, the Hobbits value an additional bottle of wine more than it costs them to produce it. So they can get more value from their resources by producing additional wine. On the other hand, if the Hobbits produce 6,000 bottles of wine, each additional bottle after the 5000th will cost them more than the value they place on it. The Hobbits will be better off if they decrease their production of wine and increase their production of bread.

Topic: Allocative Efficiency

Skill: Analytical

AACSB: Analytical thinking

3) Sarah and her boyfriend Mike want to save some money to pay for their wedding. So they decided to help people in the neighborhood by cleaning their garages and mowing lawns. Sarah takes 60 minutes to clean a garage and 80 minutes to mow a lawn. Mike takes 80 minutes to clean a garage and 80 minutes to mow a lawn. Sarah and Mike devote 10 hours per week each to these activities and get paid \$25 for each garage they clean and \$25 for each lawn they mow. Sarah says to Mike: "I have an absolute advantage in cleaning and we are equally productive in mowing. Therefore I should do both cleaning and mowing but you should only mow lawns." Mike disagrees. He thinks Sarah should specialize in cleaning garages and he should specialize in mowing lawns. Help Sarah and Mike to resolve their dispute.

a) Who has an absolute advantage in cleaning garages? In mowing lawns? Explain.

b) Draw Sarah's and Mike's production possibilities frontiers. What are each individual's opportunity costs?

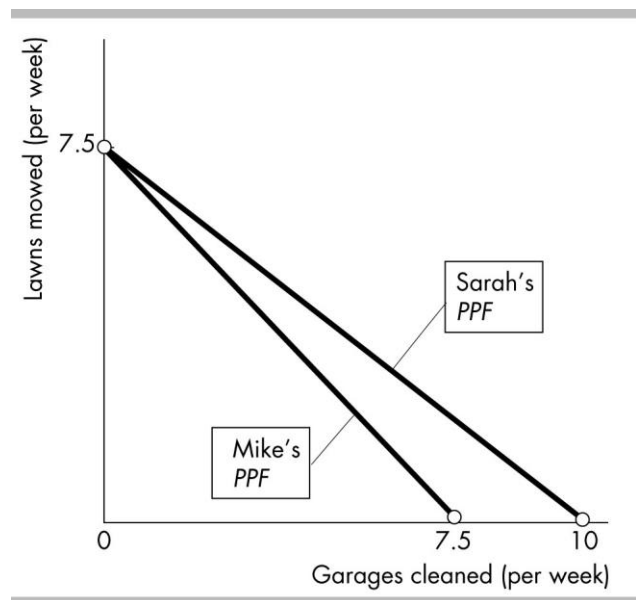
c) Who has a comparative advantage in cleaning garages? In mowing lawns? Explain.

d) Is Sarah right when she says that she should do both cleaning and mowing while Mike should only mow lawns? Or may be Mike is right when he suggests that Sarah specializes in cleaning and he specializes in mowing? Illustrate and substantiate your answer with a numerical example.



Answer:

a) Sarah has an absolute advantage in cleaning as she is more productive in this activity. She can clean 10 garages per week while Mike can only clean 7.5 garages. Sarah and Mike are equally productive in mowing lawns (each can mow 7.5 lawns per week) and therefore none of them has an absolute advantage in this activity.



b) Sarah's and Mike's PPFs are shown in the figure above. If Sarah works 10 hours a week, she can either mow 7.5 lawns or clean 10 garages. If she mows 7.5 lawns, she gives up 10 garages, which means her opportunity cost of one lawn is 1.33 garages ( $10 \div 7.5$ ). If she cleans 10 garages, she gives up 7.5 lawns and her opportunity cost is 0.75 lawns per garage ( $7.5 \div 10$ ). Mike can either mow 7.5 lawns or clean 7.5 garages, so his opportunity costs are 1 lawn per garage and 1 garage per lawn.

c) Sarah has a comparative advantage in cleaning garages. Her opportunity cost of cleaning a garage (0.75 lawns) is lower than Mike's (1 lawn). Mike has a comparative advantage in mowing lawns. His opportunity cost of mowing a lawn (1 garage) is lower than Sarah's (1.33 garages).

d) Sarah is wrong and Mike is right. Individuals can gain if they specialize in the activities where they have a comparative advantage. Therefore Sarah should specialize in cleaning while Mike should specialize in mowing. A simple numerical example can show how Mike and Sarah are better off if they specialize this way. Suppose first that Sarah and Mike specialize as Sarah suggests. For example, Sarah spends 8 hours per week cleaning garages and 2 hours per week mowing lawns. Then, she will clean 8 garages and mow 1.5 lawns per week. Mike spends all his time mowing lawns and mows 7.5 lawns per week. Together they will clean 8 garages and mow 9 lawns, earning \$425 ( $\$25 \times 8$  garages +  $\$25 \times 9$  lawns). Now, suppose Sarah and Mike specialize as Mike suggests. Then, Sarah will clean 10 garages a week while Mike will mow 7.5 lawns a week, so they will earn \$437.5 ( $\$25 \times 10$  garages +  $\$25 \times 7.5$  lawns).

Topic: Comparative Advantage and Absolute Advantage

Skill: Analytical

AACSB: Analytical thinking