Exam

Name_____

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

1) All economic questions are about
   A) what to produce.
   C) how to satisfy all our wants.
   B) how to cope with scarcity.
   D) how to make money.

   Answer: B

1) _____

2) An incentive
   A) could be either a reward or a penalty.
   B) could be a penalty but could not be a reward.
   C) is the opposite of a tradeoff.
   D) could be a reward but could not be a penalty.

   Answer: A

2) _____

3) An inducement to take a particular action is called
   A) the marginal benefit.
   C) an incentive.
   B) opportunity cost.
   D) the marginal cost.

   Answer: C

3) _____

4) All economic questions arise because we
   A) have an abundance of resources.
   B) have limited wants that need to be satisfied.
   C) want more than we can get.
   D) want more than we need.

   Answer: C

4) _____

5) The most fundamental economic problem is
   A) scarcity.
   B) security.
   C) health.
   D) the fact the United States buys more goods from foreigners than we sell to foreigners.

   Answer: A

5) _____

6) Economics is best defined as the study of how people, businesses, governments, and societies
   A) use their infinite resources.
   C) make choices to cope with scarcity.
   B) choose abundance over scarcity.
   D) attain wealth.

   Answer: C

6) _____

7) Scarcity is a situation in which
   A) most people can get only bare necessities.
   B) people can satisfy all their wants.
   C) some people can get all they want and some cannot.
   D) people cannot satisfy all their wants.

   Answer: D

7) _____

8) Economists point out that scarcity confronts 8) _____

    A) the rich but not the poor.   B) both the poor and the rich.

    C) neither the poor nor the rich.   D) the poor but not the rich.

Answer: B

9) Scarcity requires that people must 9) _____

    A) trade.   B) cooperate.   C) make choices.   D) compete.

Answer: C

10) All economic questions arise because 10) _____

    A) we want more than we can get.   B) production possibilities are unlimited.

    C) people are greedy.   D) people are irrational.

Answer: A

11) Scarcity is 11) _____

    A) when a child wants a $1.00 can of soda and two 50¢ packs of gum and has $2.00 in her pocket.

    B) our inability to satisfy all our wants.

    C) an economic problem only for poor people.

    D) a situation that exists during economic recessions but not during economic booms.

Answer: B

12) Scarcity arises from 12) _____

    A) exploration.   B) limited wants and limitless resources.

    C) limited resources and limitless wants.   D) inefficient production.

Answer: C

13) When an economist talks of scarcity, the economist is referring to the 13) _____

    A) ability of society to employ all of its resources.

    B) inability of society to satisfy all human wants because of limited resources.

    C) ability of society to continually make technological breakthroughs and increase production.

    D) ability of society to consume all that it produces.

Answer: B

14) Scarcity is experienced by 14) _____

    A) only the poor.   B) everyone.

    C) only the wealthy.   D) only producers.

Answer: B

15) Fundamental economic problems basically arise from 15) _____

    A) the fact that society has more than it needs.

    B) the unequal distribution of income.

    C) turmoil in the stock market.

    D) our wants exceeding our scarce resources.

Answer: D

16) Scarcity exists because 16) _____
    A) of the inefficient choices we make.
    B) poor people need more food and other goods.
    C) our wants exceed the resources available to satisfy them.
    D) society and people are greedy and wasteful.
    Answer: C

17) Scarcity can be eliminated through 17) _____
    A) wise use of our resources.
    B) the use of market mechanisms.
    C) exploration that helps us find new resources.
    D) None of the above because scarcity cannot be eliminated.
    Answer: D

18) As an economic concept, scarcity applies to 18) _____
    A) neither time nor money.   B) money but not time.
    C) time but not money.   D) both money and time.
    Answer: D

19) Scarcity is common to all economic systems because resources are 19) _____
    A) unlimited due to constant technological advances.
    B) unlimited and so are human desires and wants.
    C) limited and so are human desires and wants.
    D) limited, but human desires and wants are unlimited.
    Answer: D

20) People must make choices because 20) _____
    A) there are many goods available.   B) of scarcity.
    C) most people enjoy shopping.   D) None of the above answers is correct.
    Answer: B

21) The problem of "scarcity" applies 21) _____
    A) only in industrially developed countries because resources are scarce in these countries.
    B) only in economic systems that are just beginning to develop because specialized resources are
       scarce.
    C) only in underdeveloped countries because there are few productive resources in these
       countries.
    D) to all economic systems, regardless of their level of development.
    Answer: D

22) When a wealthy businessman is unable to buy tickets to the Super Bowl, he or she experiences 22) _____
_____.
    A) opportunity costs   B) scarcity
    C) economics   D) the fallacy of composition
    Answer: B

23) In every economic system, choices must be made because resources are _____ and our wants are 23) _____
_____
    A) limited; limited   B) unlimited; unlimited
    C) unlimited; limited   D) limited; unlimited
    Answer: D

24) The fundamental questions in economics result from

    A) distribution of income.

    B) an excess of production over the wants of society.

    C) technological progress.

    D) scarcity of resources relative to the wants of society.

Answer: D

25) Economics is best defined as

    A) making choices with unlimited wants but facing a scarcity of resources.

    B) how people make money and profits in the stock market.

    C) making choices from an unlimited supply of goods and services.

    D) controlling a budget for a household.

Answer: A

26) The study of economics

    A) recognizes that scarcity does not affect rich nations.

    B) focuses mainly on individual consumers.

    C) arises from the fact that our wants exceed available resources.

    D) deals mainly with microeconomics.

Answer: C

27) Economics is best defined as the science of choice and how people cope with

    A) differences in needs.   B) differences in wants.

    C) different economic systems.   D) scarcity.

Answer: D

28) Which of the following best defines the subject of economics?

    A) the study of choices that businesses make to maximize profit

    B) the art of making money

    C) the science that studies unemployment, inflation, and economic stability

    D) the study of choices made to cope with scarcity

Answer: D

29) Economics is the study of

    A) the distribution of surplus goods to those in need.

    B) ways to reduce wants to eliminate the problem of scarcity.

    C) affluence in a morally bankrupt world.

    D) the choices we make because of scarcity.

Answer: D

30) Which of the following is a macroeconomic topic?

    A) the reasons for the rise in average prices

    B) whether the army should buy more tanks or more rockets

    C) the reasons for a rise in the price of orange juice

    D) why plumbers earn more than janitors

Answer: A

31) The study of the choices made by individuals is part of the definition of

    A) normative economics.   B) macroeconomics.

    C) microeconomics.   D) positive economics.

Answer: C

32) In part, microeconomics is concerned with

    A) changes in the economy's total output of goods and services over long periods of time.

    B) the Federal Reserve's policy decisions.

    C) how a business firm decides upon the amount it produces and the price it sets.

    D) factors that explain changes in the unemployment rate over time.

Answer: C

32) _____

33) The study of the decisions of individual units in the economy is known as

    A) the study of incentives.   B) macroeconomics.

    C) microeconomics.   D) *ceteris paribus* study.

Answer: C

33) _____

34) Which of the following is an example of a microeconomic decision?

    A) a small shoe factory deciding how much leather to purchase for the next quarter's production need

    B) an individual deciding how to allocate the time he or she has for work and leisure

    C) a multinational company deciding where to relocate its world headquarter

    D) All of the above answers are correct.

Answer: D

34) _____

35) Which term *best* describes the study of the decisions of people and businesses and the interaction of these decisions?

    A) macroeconomics   B) marginal study

    C) microeconomics   D) scarcity science

Answer: C

35) _____

36) Which of the following questions is a topic that would be studied by microeconomics?

    A) How will a lower price of digital cameras affect the quantity of cameras sold?

    B) What is the current unemployment rate in the United States?

    C) Will the current budget deficit affect the well-being of the next generation?

    D) Why did production and the number of jobs shrink in 2008?

Answer: B

36) _____

37) An example of a question that might be explored in microeconomics is to determine

    A) savings by the household sector.

    B) why the U.S. economy has grown more rapidly than the Japanese economy.

    C) the total employment within the U.S. economy.

    D) the number of workers employed by Intel.

Answer: D

37) _____

38) One topic of study for a microeconomist would be the

    A) effects of an increase in government spending on the nation's production.

    B) effects an increase in the price of gasoline has on an individual.

    C) factors that lead to inflation.

    D) factors that affect aggregate unemployment.

Answer: B

38) _____

39) In part, microeconomics is concerned with the study of

    A) national output of goods and services.

    B) the Federal Reserve's policies.

    C) the effect government regulation has on the price of a product.

    D) unemployment and economic growth.

    Answer: C

40) The branch of economics that deals with the analysis of the whole economy is called

    A) marginal analysis.   B) metroanalysis.

    C) microeconomics.   D) macroeconomics.

    Answer: D

41) Macroeconomics is concerned with

    A) economy-wide variables.

    B) government decision making concerning farm price supports.

    C) individual consumers.

    D) the effects on Ford Motor of a strike by the United Auto Workers.

    Answer: A

42) Macroeconomics differs from microeconomics in that:

    A) macroeconomics studies the behavior of government while microeconomics looks at private corporations.

    B) macroeconomics focuses on the national economy and the global economy.

    C) macroeconomics studies the decisions of individuals.

    D) microeconomics looks at the economy as a whole.

    Answer: B

43) Which of the following is a macroeconomic decision or concept?

    A) how many television sets to produce

    B) the unemployment rate for each firm

    C) the price of oil

    D) the unemployment rate for the entire economy

    Answer: D

44) Which of the following questions is a macroeconomic issue?

    A) What is the future growth prospect for an economy?

    B) What effect would a cure for Mad Cow Disease have on the market for beef?

    C) How many more pounds of cookies will a consumer purchase if the price of cookies decreases?

    D) How many workers should the owner of a business hire?

    Answer: A

45) Which of the following is a microeconomic topic?

    A) The effect of the government budget deficit on inflation.

    B) The reasons why Kathy buys less orange juice.

    C) The reasons why total employment decreases.

    D) The reasons for a decline in average prices.

    Answer: B

46) Microeconomics focuses on all of the following <u>EXCEPT</u> the
    A) effect on inflation of increasing the money supply.
    B) hiring decisions made by a business.
    C) effect on cigarette sales of an increase in the tax on cigarettes.
    D) purchasing decisions made by an individual consumer.

    Answer: A

46) _____

47) In broad terms the difference between microeconomics and macroeconomics is that
    A) microeconomics studies decisions of individual people and firms and macroeconomics
        studies the entire national economy.
    B) they use different sets of tools and ideas.
    C) microeconomics studies the effects of government taxes on the national unemployment rate.
    D) macroeconomics studies the effects of government regulation and taxes on the price of
        individual goods and services whereas microeconomics does not.

    Answer: A

47) _____

48) Studying the determination of prices in individual markets is primarily a concern of
    A) microeconomics.   B) macroeconomics.
    C) negative economics.   D) positive economics.

    Answer: A

48) _____

49) The analysis of the behavior of individual decision-making units is the definition of
    A) positive economics.   B) normative economics.
    C) microeconomics.   D) macroeconomics.

    Answer: C

49) _____

50) Which of the following is a microeconomic topic?
    A) How rent ceilings impact the supply of apartments.
    B) How a tax rate increase will impact total production.
    C) How a trade agreement between the United States and Mexico affects both nations'
        unemployment rates.
    D) Comparing inflation rates across countries.

    Answer: A

50) _____

51) Which of the following questions is <u>NOT</u> a microeconomic question?
    A) What is Britney's opportunity cost of having another baby?
    B) Does the United States have a comparative advantage in information technology services?
    C) Can the Federal Reserve keep income growing by cutting interest rates?
    D) How would a tax on e-commerce affect eBay?

    Answer: C

51) _____

52) Which of the following is a macroeconomic issue?
    A) What determines the amount a firm will produce.
    B) How federal government budget deficits affect interest rates.
    C) How a rise in the price of sugar affects the market for sodas.
    D) The cause of a decline in the price of peanut butter.

    Answer: B

52) _____

53) Which of the following is a macroeconomic issue? 53) _____
    A) The hiring decisions that a business makes.
    B) The effect of an increase in the tax on cigarettes on cigarette sales.
    C) The purchasing decisions that an individual consumer makes.
    D) The effect of increasing the money supply on inflation.
    Answer: D

54) Macroeconomic topics include 54) _____
    A) studying what factors influence the price and quantity of automobiles.
    B) total, nationwide employment.
    C) the impact of government regulation of markets.
    D) studying the determination of wages and production costs in the software industry.
    Answer: B

55) Macroeconomics is the branch of economics that studies 55) _____
    A) the economy as a whole.   B) important, as opposed to trivial, issues.
    C) prices of individual goods.   D) the way individual markets work.
    Answer: A

56) The fact that wants cannot be fully satisfied with available resources reflects the definition of 56) _____
    A) the big tradeoff.   B) the what tradeoff.
    C) for whom to produce.   D) scarcity.
    Answer: D

57) Studying the effects choices have on the individual markets within the economy is part of 57) _____
    A) incentives.   B) macroeconomics.
    C) scarcity.   D) microeconomics.
    Answer: D

58) Economics can be defined as the social science that explains the _____. 58) _____
    A) choices made by households
    B) choices we make when we trade in markets
    C) choices that we make as we cope with scarcity
    D) choices made by politicians
    Answer: C

59) Scarcity is a situation in which _____. 59) _____
    A) some people are poor and others are rich   B) long lines form at gas stations
    C) we are unable to satisfy all our wants   D) something is being wasted
    Answer: C

60) Microeconomics is the study of _____. 60) _____
    A) the global economy
    B) all aspects of scarcity
    C) the choices that individuals and businesses make
    D) the national economy
    Answer: C

61) When an economy produces more houses and fewer typewriters, it is answering the _____   61) _____
question.
    A) "where"   B) "how"   C) "for whom"   D) "what"

Answer: D

62) When firms in an economy start producing more computers and fewer televisions, they are   62) _____
answering the _____ question.
    A) "where"   B) "for whom"   C) "what"   D) "when"

Answer: C

63) _____ all the objects that we value and are willing to pay for.   63) _____
    A) Capital is   B) Wants are
    C) Resources are   D) Goods and services are

Answer: D

64) If Taco Bell decides to produce more tacos and fewer burritos, Taco Bell is answering the _____   64) _____
question.
    A) "scarcity"   B) "why"   C) "when"   D) "what"

Answer: C

65) When a farmer decides to raise hogs instead of cattle, the farmer is answering the _____   65) _____
question.
    A) "for whom"   B) "why"   C) "what"   D) "how"

Answer: C

66) When a farmer decides to grow sugar cane instead of radishes, the farmer is answering the   66) _____
_____ question.
    A) "for whom"   B) "when"   C) "why"   D) "what"

Answer: D

67) When a country decides to produce fewer bombers and more public housing projects, it is   67) _____
answering the _____ question.
    A) "for whom"   B) "what"   C) "how"   D) "defense"

Answer: B

68) When a firm decides to produce more electric cars and fewer gas guzzlers, it is most directly   68) _____
answering the _____ question.
    A) "what"   B) "how"   C) "for whom"   D) "scarcity"

Answer: A

69) When a textile firm decides to produce more cotton fabric and less synthetic fabric, it is most   69) _____
directly answering the _____ question.
    A) "how"   B) "what"   C) "why"   D) "for whom"

Answer: B

70) U.S. producers decide to produce more compact cars and fewer SUVs as the price of gasoline rises.   70) _____
Producers are answering the _____ question.
    A) "how"   B) "what"   C) "how many"   D) "when"

Answer: B

71) The question "Should CDs or DVDs be produced?" is an example of the 71) _____
    A) "for whom" question.   B) "what" question.
    C) "where" question.   D) "how" question.

Answer: B

72) Which of the following statements is correct? 72) _____
    A) The United States produces an equal amount of goods and services.
    B) The United States produces more goods than services.
    C) The United States produces more services than goods.
    D) The percentage of people producing goods in the United States has steadily increased over
       the last 60 years.

Answer: C

73) In the United States, the percentage of people employed in _____ over the last 60 years. 73) _____
    A) farming has increased   B) manufacturing has increased
    C) services has decreased   D) construction has increased

Answer: A

74) In the U.S. economy, which of the following statements is true? 74) _____
    A) The economy is too complex to determine the proportion of production that is devoted to
       producing services.
    B) More goods are produced than services.
    C) More services are produced than goods.
    D) Production is divided evenly between goods and services.

Answer: C

75) Over the last 60 years, as a proportion of total production, the U.S. economy has produced more 75) _____
    A) agricultural products.   B) goods.
    C) services.   D) goods and services.

Answer: C

76) In the U.S. economy, a recent trend has been that 76) _____
    A) employment in both agriculture and the service industry has been decreasing.
    B) employment in agriculture has been increasing.
    C) employment in mining, construction, and manufacturing has been increasing.
    D) employment in the service industry has been increasing.

Answer: D

77) The largest part of what the United States produces today is _____ such as _____. 77) _____
    A) goods; education and entertainment   B) services; textbooks and computers
    C) goods; food and electronic equipment   D) services; trade and health care

Answer: D

78) When China builds a dam using few machines and a great deal of labor, it is answering the 78) _____
    _____ question.
    A) "how"   B) "what"   C) "where"   D) "for whom"

Answer: A

79) When a textile company keeps track of its inventory using a computer and its competitor uses a spreadsheet and pencil, they are both answering the _____ question.

    A) "how"   B) "where"   C) "for whom"   D) "what"

Answer: A

79) _____

80) Whether a company produces fishing rods mostly by hand or using high-tech machinery is a question of

    A) why will the goods be produced.   B) how will the goods be produced.
    C) for whom will goods be produced.   D) where will the goods be produced.

Answer: B

80) _____

81) When a California farmer decides to harvest lettuce by the use of machines instead of by migrant workers, the farmer is answering the _____ question.

    A) "what"   B) "for whom"   C) "scarcity"   D) "how"

Answer: D

81) _____

82) When a farmer decides to harvest oranges by huge machines instead of by migrant workers, the farmer is answering the _____ question.

    A) "why"   B) "what"   C) "scarcity"   D) "how"

Answer: D

82) _____

83) When a lawyer decides to type a brief on a computer rather than use a typewriter, the lawyer is answering the _____ question.

    A) "what"   B) "why"   C) "how"   D) "scarcity"

Answer: C

83) _____

84) When a firm decides to produce computers using robots instead of people, it is answering the _____ question.

    A) "scarcity"   B) "why"   C) "what"   D) "how"

Answer: D

84) _____

85) To meet increased demand for its good, a firm decides to hire a few high-skilled workers rather than hire many low-skilled workers. The firm is answering the _____ question.

    A) "what"   B) "how"   C) "scarcity"   D) "when"

Answer: B

85) _____

86) An art museum decides to offer tours by having visitors listen to cassette tapes rather than have tour guides. The museum is answering the _____ question.

    A) "why"   B) "scarcity"   C) "how"   D) "what"

Answer: C

86) _____

87) Human capital is

    A) all capital owned by individuals, but not by corporations or governments.
    B) the skill and knowledge of workers.
    C) machinery that meets or exceeds federal safety standards for use by humans.
    D) all capital owned by individuals or corporations, but not by governments.

Answer: B

87) _____

88) Entrepreneurs do all of the following <u>EXCEPT</u>

88) _____

    A) come up with new ideas about what and how to produce.

    B) organize labor, land, and capital.

    C) bear risk from business decisions.

    D) own all the other resources used in the production process.

Answer: D

89) To answer the "for whom" question, we study

89) _____

    A) business cycles.   B) technological change.

    C) the global economy.   D) income differences.

Answer: D

90) The fact that people with higher incomes get to consume more goods and services addresses the _____ question.

90) _____

    A) "when"   B) "how"   C) "where"   D) "for whom"

Answer: D

91) Which of the following is <u>NOT</u> a factor of production?

91) _____

    A) the effort of farmers raising cattle.

    B) the water used to cool a nuclear power plant.

    C) the management skill of a small business owner.

    D) the wages paid to workers.

Answer: D

92) Which of the following are considered factors of production used to produce goods and services?

92) _____

    I.   Land

    II.   Labor

    III. Capital

    IV. Entrepreneurship

    A) I and III only   B) I and II only   C) I, II and III only   D) I, II, III and IV

Answer: D

93) Factors of production include all of the following <u>EXCEPT</u>

93) _____

    A) labor.

    B) capital.

    C) land.

    D) None of the above answers are correct because all are factors of production.

Answer: D

94) What are the four categories into which factors of production are grouped?

94) _____

    A) land, labor, capital, and entrepreneurship

    B) profit, wages, rent, and interest

    C) entrepreneurship, profit, labor, and wages

    D) capital, human capital, land, and labor

Answer: A

95) Factors of production include all of the following <u>EXCEPT</u> _____.

95) _____

    A) an wheat field that is not irrigated   B) money

    C) machines made in past years   D) entrepreneurship

Answer: B

96) The income earned by the people who sell the services of the factor of production _____ is called   96) _____
    _____.
    A) entrepreneurship; wages   B) capital; rent
    C) land; profit   D) entrepreneurship; profit
    Answer: D

97) Factors of production are grouped into four categories: 97) _____
    A) land, capital, money, entrepreneurship   B) labor, capital, money, entrepreneurship
    C) land, labor, capital, money   D) land, labor, capital, entrepreneurship
    Answer: D

98) Which of the following is NOT a factor of production?   98) _____
    A) wilderness areas that have yet to be developed
    B) 175 shares of Microsoft stock
    C) a person developing a production schedule for a new product
    D) vans used by a bakery company for deliveries
    Answer: B

99) Which of the following is correct? Factors of production are   99) _____
    A) the inputs used to produce goods and services.
    B) the fundamental source of abundance.
    C) only land and labor.
    D) land, labor, the price system, and capital.
    Answer: A

100) Factors of production include   100) _____
    A) land, labor, capital and entrepreneurship.
    B) the economic system.
    C) labor and capital (not land, which is fixed).
    D) only capital, land, and labor.
    Answer: A

101) Keeping in mind economists' definition of factors of production, which of the following is NOT a   101) _____
    factor of production?
    A) low-skilled labor   B) money
    C) an engineer   D) coal
    Answer: B

102) Which of the following is NOT a factor of production?   102) _____
    A) a university professor   B) 100 shares of Microsoft stock
    C) mineral resources   D) an apartment building
    Answer: B

103) Which factor of production earns profit?   103) _____
    A) human capital   B) money
    C) entrepreneurship   D) land
    Answer: C

104) Which factor of production earns most income in the United States?   104) _____
    A) entrepreneurship   B) labor
    C) capital   D) money

Answer: B

105) Which of the following best defines capital as a factor of production?   105) _____
    A) Financial assets used by businesses.
    B) The gifts of nature that businesses use to produce goods and services.
    C) Instruments, machines, and buildings used in production.
    D) The knowledge and skills that people obtain from education and use in production of goods
       and services.

Answer: C

106) Which of the following is <u>NOT</u> a factor of production?   106) _____
    A) a new computer used by a small business owner.
    B) a tractor used by a wheat farmer.
    C) a share of stock issued by a firm.
    D) the time worked by elementary school teachers.

Answer: C

107) In economics, the term "land" means   107) _____
    A) land, mineral resources, and nature's other bounties.
    B) land that is devoted to economic pursuits.
    C) only land that is used in agricultural production.
    D) land used for agricultural and urban purposes.

Answer: A

108) A natural resource, such as fishing territories, is considered an example of   108) _____
    A) land only.   B) land, labor, capital and entrepreneurship.
    C) both land and labor.   D) only capital.

Answer: A

109) The "gifts of nature" are included as part of which factor of production?   109) _____
    A) labor   B) capital
    C) land   D) entrepreneurship

Answer: C

110) Copper falls into which factor of production category?   110) _____
    A) land   B) labor
    C) entrepreneurship   D) capital

Answer: A

111) An autoworker is an example of _____ and earns _____.   111) _____
    A) entrepreneurship; wages.   B) capital; rent.
    C) labor; wages.   D) labor; rent.

Answer: C

112) Overtime worked by a JCPenney associate is considered _____ and earns _____.
    A) entrepreneurship; profit.
    B) human capital; interest.
    C) labor; wages.
    D) labor; profit.

112) _____

Answer: C

113) The term human capital refers to
    A) buildings and machinery.
    B) entrepreneurship and risk-taking.
    C) labor resources used to make capital equipment.
    D) people's knowledge and skill.

113) _____

Answer: D

114) In the United States, the quality of labor has been increasing, based on evidence that over time
    A) the percentage of the adult population that has had 4 years or more of college has been decreasing.
    B) the percentage of the adult population that has had some high school has been increasing.
    C) the percentage of the adult population that has completed high school has been decreasing.
    D) a larger percentage of the adult population has completed high school or 4 years or more of college.

114) _____

Answer: D

115) Joy is training to become a chef. The skills she is obtaining from her training and education will increase what type of resource?
    A) land
    B) human capital
    C) physical capital
    D) entrepreneurship

115) _____

Answer: B

116) Which of the following is NOT an investment in human capital?
    A) a student purchases a laptop computer
    B) a computer science student learns how to repair a laptop computer
    C) a computer science student takes a course on programming a laptop computer
    D) a business student takes a seminar in using a laptop computer

116) _____

Answer: A

117) Which of the following is NOT an investment in human capital?
    A) Johnny learns how to read
    B) a mechanic attends a training workshop on a new type of engine
    C) a student's purchase of a personal computer
    D) a medical student's internship

117) _____

Answer: C

118) A person goes to college to become an engineer. This is an example of an
    A) increase in entrepreneurship.
    B) investment in physical capital.
    C) investment in human capital.
    D) increase in labor.

118) _____

Answer: C

119) Pete has just decided to go to college to learn how to become a certified public accountant. Pete has made a decision that will increase the nation's
    A) labor supply today.
    B) human capital.
    C) physical capital.
    D) ALL of the above answers are correct.

119) _____

Answer: B

120) In economics, the term "capital" refers to   120) _____
    A) mineral resources.   B) buildings and equipment.
    C) consumer goods.   D) the money in one's pocket.

Answer: B

121) Jon works in an automobile factory. He operates a machine that makes the fenders for automobiles.   121) _____
The machine Jon operates is what type of resource?
    A) capital   B) labor
    C) land   D) entrepreneurship

Answer: A

122) Which of the following is a type of capital?   122) _____
    A) low-skilled labor   B) machine
    C) acre of land   D) mineral resource

Answer: B

123) Human resources that perform the functions of organizing, managing, and assembling the other   123) _____
resources are called
    A) physical capital.   B) productive capital.
    C) entrepreneurship.   D) venture capital.

Answer: C

124) The economic resource that organizes the use of other economic resources is   124) _____
    A) capital.   B) labor.
    C) entrepreneurship.   D) land.

Answer: C

125) Entrepreneurs directly do all of the following EXCEPT   125) _____
    A) face risks that arise from making business decisions.
    B) create new ideas about what and how to produce.
    C) make business decisions.
    D) decide for whom goods and services are produced.

Answer: D

126) Carl, who is an attorney, earns $250 an hour while Ken, who is an auto mechanic, earns $25 an   126) _____
hour. This income difference is most directly an example of an economy answering the _____
question.
    A) "for whom"   B) "scarcity"   C) "how"   D) "when"

Answer: A

127) Differences in income are most directly related to which of the following big economic question?   127) _____
    A) In what quantities are various goods and services produced?
    B) What goods and services are produced?
    C) Who consumes the goods and services that are produced?
    D) How are goods and services produced?

Answer: C

128) The fact that some people can afford to live in beautiful homes while others are homeless, is most directly an example of an economy facing the _____ question.

    A) "how"   B) "for whom"   C) "when"   D) "why"

Answer: B

129) The fact that a rock star earns $5 million a year while a teacher earns $25,000 annually is most directly an example of an economy answering the _____ question.

    A) "for whom"   B) "when"   C) "why"   D) "how"

Answer: A

130) Sue, who has a law degree, earns $200,000 a year while Chris, a high school dropout earns $7.60 an hour. This situation most directly reflects an example of an economy answering the _____ question.

    A) "how"   B) "why"   C) "when"   D) "for whom"

Answer: D

131) A star athlete can afford a garage full of exotic cars while other people can only afford to take a city bus for transportation. This is most directly an example of an economy answering the _____ question.

    A) "why"   B) "when"   C) "for whom"   D) "what"

Answer: C

132) One economist says that raising taxes on gas would be in the social interest. What does this economist mean?

    A) Higher taxes on gas would benefit everyone.
    B) Higher taxes on gas would benefit society as a whole.
    C) Raising taxes on gas would benefit most of the people.
    D) Raising taxes on gas would benefit some social groups.

Answer: B

133) In a market economy, what people do in the pursuit of their self-interest

    A) usually forwards the social interest.
    B) is always in conflict with the social interest.
    C) is usually in conflict with the social interest.
    D) always forwards the social interest.

Answer: A

134) Which of the following is NOT part of the first big economic question?

    A) For whom are goods and services produced?
    B) How are goods and services produced?
    C) Why do incentives affect only marginal costs?
    D) What goods and services are produced?

Answer: C

135) The question, "Should Taco Bell produce more tacos or more burritos?" is an example of the

    A) "how" question.   B) "where" question.
    C) "for whom" question.   D) "what" question.

Answer: D

136) The concept of tradeoffs concerns all of the following questions <u>EXCEPT</u>:
    A) Why should goods and services be produced?
    B) How should goods and services be produced?
    C) For whom should goods and services be produced?
    D) What goods and services should be produced?

136) _____

    Answer: A

137) In economics we learn that
    A) sometimes there is such a thing as a "free lunch."
    B) opportunity costs are all of the possible alternatives given up when we make a choice.
    C) tradeoffs allow us to avoid the problem of opportunity cost.
    D) None of the above answers is correct.

137) _____

    Answer: D

138) When a university decides to add to the football stadium instead of adding to the baseball stadium, it faces the
    A) macroeconomic question.   B) "for whom" tradeoff.
    C) "what" tradeoff.   D) "how" tradeoff.

138) _____

    Answer: C

139) Congress votes for more national defense but cuts back on educational programs. This choice involves
    A) no tradeoff.   B) a "how" tradeoff.
    C) a "for whom" tradeoff.   D) a "what" tradeoff.

139) _____

    Answer: D

140) When a farmer decides to increase the amount of acreage devoted to wheat and grow fewer acres of soybeans, the farmer is facing the
    A) "for whom" tradeoff.   B) microeconomic question.
    C) "how" tradeoff.   D) "what" tradeoff.

140) _____

    Answer: D

141) When a photographer decides to use a digital camera to take shots versus using film, the photographer is facing the
    A) microeconomic question.   B) "what" tradeoff.
    C) "for whom" tradeoff.   D) "how" tradeoff.

141) _____

    Answer: D

142) The "how" tradeoff occurs when
    A) the government increases income taxes paid by the rich.
    B) a firm decides to produce refrigerators instead of dishwashers.
    C) we answer the macroeconomic question.
    D) a farm uses machinery to pick oranges instead of employing migrant workers.

142) _____

    Answer: D

143) When the government decides to provide tax relief for small businesses while placing higher taxes on large corporations, it is facing the
    A) macroeconomic question.   B) "how" tradeoff.
    C) "for whom" tradeoff.   D) "what" tradeoff.

143) _____

    Answer: C

144) Because we face scarcity, every choice involves

144) _____

    A) money
                                  B) giving up something for nothing.

    C) the question "what."
                    D) an opportunity cost

    Answer: D

145) The term used to emphasize that making choices in the face of scarcity involves a cost is

145) _____

    A) opportunity cost.
                      B) substitution cost.

    C) accounting cost.
                    D) utility cost.

    Answer: A

146) The loss of the highest-valued alternative defines the concept of

146) _____

    A) marginal benefit.
                      B) opportunity cost.

    C) entrepreneurship.
                  D) scarcity.

    Answer: B

147) When an action is chosen, the highest-valued alternative <u>NOT</u> chosen is called the

147) _____

    A) implicit cost.
                      B) opportunity cost.

    C) explicit cost.
                    D) accounting cost.

    Answer: B

148) Opportunity cost means the

148) _____

    A) accounting cost minus the marginal benefit.

    B) highest-valued alternative forgone.

    C) accounting cost minus the marginal cost.

    D) monetary costs of an activity.

    Answer: B

149) The opportunity cost of any action is

149) _____

    A) the monetary cost but not the time required.

    B) the highest-valued alternative forgone.

    C) all the possible alternatives forgone.

    D) the time required but not the monetary cost.

    Answer: B

150) The opportunity cost of something you decide to get is

150) _____

    A) the lowest valued alternative you give up to get it.

    B) the highest valued alternative you give up to get it.

    C) all the possible alternatives that you give up to get it.

    D) the amount of money you pay to get it.

    Answer: B

151) Opportunity cost is best defined as

151) _____

    A) how much money is paid for something, taking inflation into account.

    B) how much money is paid for something.

    C) all the alternatives that are given up to get something.

    D) the highest-valued alternative that is given up to get something.

    Answer: D

152) Which of the following statements are correct? 152) _____
    I.   The "highest-valued alternative given up to get something" is the opportunity cost.
    II. Wealthy economies don't experience opportunity costs.
    III. Scarcity creates opportunity costs.
    A) I and III   B) I and II   C) I, II, and III   D) I only

Answer: A

153) Opportunity cost is best defined as 153) _____
    A) the value of the next best alternative that is given up in making a choice.
    B) the total of all other alternatives that are given up in making a choice.
    C) how much money and time it takes to consume something.
    D) how much money is paid for something.

Answer: A

154) Which of the following best describe(s) opportunity costs? 154) _____
    I.   An opportunity cost is the next best alternative a person has given up when he or she makes a c
to do something else.
    II. Opportunity costs are always measured in terms of dollars.
    III. Opportunity costs are higher for U.S.-made goods.
    A) I only   B) I and III   C) I and II   D) II and III

Answer: A

155) Opportunity cost is defined as 155) _____
    A) all the possible alternatives given up.
    B) the highest-valued alternative given up.
    C) the amount of money spent to take part in the activity chosen.
    D) the top two alternatives given up.

Answer: B

156) Opportunity cost is defined as the 156) _____
    A) lowest-valued alternative given up.
    B) highest-valued alternative given up.
    C) total value of all the alternatives given up.
    D) cost of not doing all of the things you would like to do.

Answer: B

157) The ultimate cost of any choice is 157) _____
    A) what someone else would be willing to pay.
    B) the dollars expended.
    C) the highest-valued alternative forgone.
    D) the after-tax cost.

Answer: C

158) Opportunity cost is measured in terms of 158) _____
    A) both monetary value and time.   B) only monetary value.
    C) only time.   D) either monetary value or time.

Answer: A

159) You have the choice of going on vacation to Florida for one week, staying at work for the week, or spending the week doing fix-up projects around your house. If you decide to go to Florida, the opportunity cost of the trip is

159) _____

    A) working, because you would be giving up dollars.

    B) working *or* doing fix-up projects, depending on which you would have done otherwise.

    C) working *and* doing fix-up projects.

    D) nothing because you will enjoy the trip to Florida.

Answer: B

160) The night before a midterm exam, you decide to go to the movies instead of studying for the exam. You score 60 percent on your exam. If you had studied the night before, you'd have scored 70 percent. What was the opportunity cost of your evening at the movies?

160) _____

    A) 70 percent   B) 60 percent.

    C) 10 percent off your grade.   D) Zero.

Answer: C

161) On Saturday morning, you rank your choices for activities in the following order: go to the library, work out at the gym, have breakfast with friends, and sleep late. Suppose you decide to go to the library. Your opportunity cost is

161) _____

    A) zero because you do not have to pay money to use the library.

    B) not clear because not enough information is given.

    C) working out at the gym, having breakfast with friends, and sleeping late.

    D) working out at the gym.

Answer: D

162) Fred and Ann are both given free tickets to see a movie. Both decide to see the same movie. We know that

162) _____

    A) it is not possible to calculate the opportunity cost of seeing the movie because the tickets were free.

    B) both bear an opportunity cost of seeing the movie because they could have done other things instead of seeing the movie.

    C) it is possible to calculate the opportunity cost of seeing the movie and it is zero because the tickets were free.

    D) both bear the same opportunity cost of seeing the movie because they are doing the same thing.

Answer: B

163) You have the choice of going to Hawaii for a week, staying at work for the week, or spending the week skiing. If you decide to go to Hawaii, the opportunity cost is

163) _____

    A) working, because you would be giving up a week's pay.

    B) the value of working or skiing, depending on which you would have done rather than go to Hawaii.

    C) the value of working and skiing.

    D) None of the above if you enjoy the time spent in Hawaii.

Answer: B

164) The opportunity cost of attending college includes the cost of 164) _____
    A) tuition, books, and the lost wages for the hours spent studying.
    B) the tuition but not the job at which you would otherwise have worked.
    C) the highest valued alternative to attending college plus the cost of tuition.
    D) the highest valued alternative to attending college.

Answer: C

165) Today, Julie attended her 12:30 Economics class. If she hadn't gone to class, Julie would have gone 165) _____
out to lunch with friends. She had other options; she could have worked or slept in. Julie's
opportunity cost of going to class is the
    A) income, pleasure, and sleep she gave up.   B) income she gave up.
    C) lunch she gave up.   D) sleep she gave up.

Answer: C

166) Joe likes to sleep late in the mornings and play tennis in the afternoons. The opportunity cost of Joe 166) _____
attending his morning class for one hour is
    A) nothing because he is paying for his class.
    B) an hour of sleep given up.
    C) both the tennis given up and the sleep given up.
    D) an hour of tennis given up.

Answer: B

167) By choosing to come to class, you know you are giving up the ability to watch television. In doing 167) _____
so, you are applying the concept of
    A) the *post hoc* fallacy.   B) opportunity cost.
    C) involuntary exchange.   D) the fallacy of composition.

Answer: B

168) John has two hours of free time this evening. He ranked his alternatives, first go to a concert, 168) _____
second go to a movie, third study for an economics exam, and fourth answer his e-mail. What is
the opportunity cost of attending the concert for John?
    A) attending a movie, studying for an economics exam, and answering his e-mail
    B) answering his e-mail
    C) attending a movie
    D) studying for an economics exam

Answer: C

169) You decide to take a vacation and the trip costs you $2,000. While you are on vacation, you do not 169) _____
report to work where you could have earned $750. The opportunity cost of the vacation is
    A) $750.   B) $2,750.   C) $2,000.   D) $1,250

Answer: B

170) The term "opportunity cost" points out that 170) _____
    A) executives do not always recognize opportunities for profit as quickly as they should.
    B) not all individuals will make the most of life's opportunities because some will fail to achieve
       their goals.
    C) there may be such a thing as a free lunch.
    D) any decision regarding the use of a resource involves a costly choice.

Answer: D

171) During the next hour John can play basketball, watch television, or read a book. The opportunity cost of reading a book   171) _____
    A) equals how much John enjoys the book.
    B) is how much the book cost when it was purchased.
    C) is the value of playing basketball if John prefers that to watching television.
    D) is the value of playing basketball *and* the value of watching television.
    Answer: C

172) Misty has the option of purchasing one of three products: Brand A, Brand B, or Brand C. Each costs   172) _____
ten dollars. If she decides that Brand A meets her needs best, then the opportunity cost of this decision is
    A) twenty dollars.
    B) Brand B or Brand C, depending on which is considered the highest-value alternative forgone.
    C) Brand A.
    D) Brand B plus Brand C.
    Answer: B

173) Which of the following is <u>NOT</u> an example of an opportunity cost?   173) _____
    A) Because Mary is now being paid a higher wage, she can afford to buy a new car even though she is moving into a bigger apartment.
    B) Because David used all of his vacation time to paint his house, he was unable to visit the Caribbean last year.
    C) By choosing to attend college, Jean was not able to continue working as an electrician; as a result, she gave up more than $85,000 in earnings while she was in college.
    D) By spending Thursday night studying for an economics exam, a student was unable to complete a homework assignment for calculus class.
    Answer: A

174) From 8 to 11 p.m., Sam can either attend a basketball game, a hockey match or the symphony.   174) _____
Suppose that Sam decides to attend the hockey match and thinks to herself that if she did not go to the match she would go to the symphony. Then the opportunity cost of attending the hockey match is
    A) going to the symphony.
    B) going to the symphony and the basketball game.
    C) three hours of time.
    D) going to the basketball game.
    Answer: A

175) When the government chooses to use resources to build a dam, these sources are no longer   175) _____
available to build a highway. This choice illustrates the concept of
    A) a fallacy of composition.   B) opportunity cost.
    C) a market mechanism.   D) macroeconomics.
    Answer: B

176) Suppose you plan to take summer courses. The cost of tuition and textbooks is $1,200, housing will cost you $400, and you'll spend $300 on food. If you decide not to take courses in the summer, you'll live in your parents' house for free and spend only $100 on food. Also, if you don't take courses in the summer, you'll work full time and could earn at least $5,000. You can still work part time while taking courses, but the most you can earn is $1,000. What is your opportunity cost of taking courses in the summer?

A) $6,900
B) $1,900
C) $4,000
D) $5,800

Answer: D

177) After you graduate, you have decided to accept a position working at the Bureau of Labor Statistics for $45,000.00 a year. The two other offers you received were working for Wal-Mart for $38,000 and working for Ernst and Young consulting for $42,000. Of these two offers, you would have preferred the job at Ernst and Young. What is the opportunity cost of accepting the position at the Bureau of Labor Statistics?

A) the $45,000 you are paid for working at the Bureau of Labor Statistics
B) the $42,000 you would have been paid working for Ernst and Young and the $38,000 you would have been paid working for Wal-Mart
C) the $38,000 you would have been paid working for Wal-Mart
D) the $42,000 you would have been paid working for Ernst and Young

Answer: D

178) Bill Bonecrusher graduates from college with a choice of playing professional football at $2 million a year or coaching for $50,000 a year. He decides to play football, but eight years later, though he could continue to play football at $2 million a year, he quits football to make movies for $3 million a year. His opportunity cost of playing football at graduation was _____ and eight years later the opportunity cost of making movies was _____.

A) $2 million; $3 million
B) $50,000; $2 million
C) $2 million; $2 million
D) $50,000; $50,000

Answer: B

179) During the summer you have made the decision to attend summer school, which prevents you from working at your usual summer job in which you normally earn $6,000 for the summer. Your tuition cost is $3,000 and books and supplies cost $1,300. The opportunity cost of attending summer school is

A) $10,300.
B) $4,300.
C) $3,300.
D) $6,000.

Answer: A

180) Jill, an economics student, has already spent 5 hours cleaning her room. In deciding whether or not to continue cleaning for another hour, she applies the economic principle(s) of

A) productivity.
B) scarcity.
C) *ceteris paribus.*
D) choosing at the margin.

Answer: D

181) Marginal benefit is the benefit
A) of an activity that exceeds its cost.
B) that arises from the secondary effects of an activity.
C) that arises from an increase in an activity.
D) that your activity provides to someone else.

Answer: C

182) The benefit that arises from an increase in an activity is called

   A) an incentive.   B) the marginal cost.

   C) the marginal benefit.   D) opportunity cost.

182) _____

Answer: C

183) A benefit from an increase in activity is called

   A) a total benefit.   B) an opportunity gain.

   C) an economic benefit.   D) a marginal benefit.

183) _____

Answer: D

184) The marginal benefit is the

   A) additional cost from one more unit of an activity.

   B) forgone opportunity.

   C) loss of the highest-valued alternative.

   D) additional gain from one more unit of an activity.

184) _____

Answer: D

185) The additional benefit of increasing some activity is called the

   A) marginal benefit.   B) marginal opportunity benefit.

   C) marginal opportunity cost.   D) scarcity benefit.

185) _____

Answer: A

186) In terms of dollars, the marginal benefit of working five days a week instead of four days a week is

   A) the wages received for 5 days of work.

   B) the wages received for 4 days of work.

   C) the wages received for the fifth day of work.

   D) None of the above answers is correct.

186) _____

Answer: C

187) Your employer has asked you to start working overtime and has offered to pay $18 per hour for every hour you work beyond forty hours a week. The wage rate for each of the first forty hours will continue to be the usual $15 per hour. In terms of dollars, what is the marginal benefit of working each hour of overtime?

   A) $3.00   B) $18.00   C) $15.00   D) zero

187) _____

Answer: B

188) A student is studying for an exam 2 hours a day and is debating whether to study an extra hour. The student's marginal benefit

   A) depends on the grade the student earns on the exam.

   B) is greater than the student's marginal cost.

   C) is the benefit the student receives from studying the extra hour.

   D) is the benefit the student receives from studying all 3 hours.

188) _____

Answer: C

189) A student athlete is deciding whether to work out for an extra hour. Her marginal benefit from another hour of exercise

   A) is the benefit she receives from exercising the additional hour.

   B) is less than the marginal cost of the additional hour.

   C) is the benefit she gets from all the hours she's worked out all week.

   D) depends on the cost of the workout.

189) _____

Answer: A

190) Suppose that you are spending two hours a day studying economics, and your grade is 85 percent. You want a higher grade and decide to study for an extra hour a day. As a result, your grade rises to 90 percent. Your marginal benefit is the

    A) higher grade that you get.
    B) extra hour per day you spend on studying.
    C) three hours per day you spend on studying.
    D) 5 point increase in your grade.

Answer: D

191) Marginal cost is the cost

    A) that arises from the secondary effects of an activity.
    B) that your activity imposes on someone else.
    C) that arises from an increase in an activity.
    D) of an activity that exceeds its benefit.

Answer: C

192) A cost due to an increase in activity is called

    A) an incentive loss.   B) the total cost.
    C) a marginal cost.   D) a negative marginal benefit.

Answer: C

193) The cost of an increase in an activity is called

    A) an incentive.   B) the marginal cost.
    C) opportunity cost.   D) the marginal benefit.

Answer: B

194) Marginal cost is the

    A) cost of a small increase in an activity.
    B) cost of all forgone alternatives.
    C) cost of an activity minus the benefits of the activity.
    D) total cost of an activity.

Answer: A

195) Laura is a manager for HP. When Laura must decide whether to produce a few additional printers, she is choosing at the margin when she compares

    A) the extra revenue from selling a few additional printers to the average cost of producing the additional printers.
    B) HP's printers to printers from competing companies, such as Lexmark.
    C) the total revenue from sales of printers to the total cost of producing all the printers.
    D) the extra revenue from selling a few additional printers to the extra costs of producing the printers.

Answer: D

196) Managers at Dell are deciding whether to increase their production of Inspiron laptops by 4,000 per month. With the increased production, the company's revenue will increase by $10 million a month, its cost will increase by $9 million a month, and its total monthly profit will be $30 million. Dell's managers

    A) should not approve producing 4,000 more laptops because it will cost the company too much.

    B) should approve producing 4,000 more laptops because the marginal benefit of this action exceeds the marginal cost.

    C) should approve producing 4,000 more laptops because this will result in a substantial total profit.

    D) cannot make a rational decision unless they know what the company's total profit is before the increase in production.

Answer: B

197) A lawn service is deciding whether to add an additional employee to its summer crew. The marginal cost of hiring this worker depends on the

    A) total amount paid to the new worker.

    B) the additional revenue created by having an additional worker.

    C) total amount paid to all previously hired workers.

    D) the total amount paid to all the workers, both the new one and the previously hired workers.

Answer: A

198) Suppose the cost of 5 pencils is $1.50. The cost of 6 pencils is $1.75. The marginal cost of the sixth pencil is

    A) $1.75.   B) $ .25.   C) $1.50.   D) $3.25.

Answer: B

199) If the marginal cost of an activity exceeds the marginal benefit, then

    A) the person must concentrate on the activity's total benefits.

    B) the forgone alternatives' costs must be increased.

    C) an alternative action will be selected.

    D) the activity will occur *because* of the high marginal cost.

Answer: C

200) To decide whether to go to the beach for spring break, you should

    A) not make the *post hoc* fallacy.

    B) not make the fallacy of composition.

    C) compare marginal cost to the marginal benefit of taking the trip.

    D) unscramble cause and effect.

Answer: C

201) A store remains open from 8 a.m. to 4 p.m. each weekday. The store owner is deciding whether to stay open an extra hour each evening. The owner's marginal benefit

    A) must be greater than or equal to the owner's marginal cost if the owner decides to stay open.

    B) is the benefit the owner receives from staying open from 8 a.m. to 5 pm.

    C) is the benefit the owner receives from staying open from 8 a.m. to 6 pm.

    D) depends on the revenues the owner makes during the day.

Answer: A

202) If the marginal cost of an activity falls or the marginal benefit rises, then you would 202) _____
  A) not change your participation.   B) undertake more of the activity.
  C) undertake less of the activity.   D) cease participation in the activity.

 Answer: B

203) Which of the following creates an incentive to increase the amount of an activity? 203) _____
  A) an increase in the marginal cost of the activity and a decrease in the marginal benefit of the
   activity
  B) constant marginal cost and constant marginal benefit of the activity
  C) a decrease in the marginal cost of the activity and an increase in the marginal benefit of the
   activity
  D) None of the above create an incentive to increase the amount of an activity.

 Answer: C

204) Suppose that the government of New York state promises to decrease taxes to a firm if it decides to 204) _____
  stay in New York instead of moving to another state. This policy on the part of the state constitutes
  _____, to make the _____ of the firm remaining in New York.
  A) a command; marginal cost exceed the marginal benefit
  B) an incentive; marginal cost exceed the marginal benefit
  C) an incentive; marginal benefit exceed the marginal cost
  D) a command; marginal benefit exceed the marginal cost

 Answer: C

205) Jed had an exam score of 50 percentage points. There is an extra credit assignment that Jed can 205) _____
  complete that will raise his exam score by 20 percentage points. Jed has determined that the extra
  credit assignment will take 10 hours of his time. Jed will complete the assignment he values the
  A) 70 percentage points more than the 10 hours of his time.
  B) 10 hours of his time more than the 20 percentage points.
  C) wants a higher score.
  D) 20 percentage points more than the 10 hours of his time.

 Answer: D

206) The fact that KFC decides to produce chicken rather than meat loaf best reflects _____ tradeoff. 206) _____
  A) a how   B) an incentive   C) a for whom   D) a what

 Answer: D

207) From 8 P.M. to 10 P.M., Susan can attend a movie, study, or talk with friends. Suppose that Susan 207) _____
  decides to go to the movie but thinks that, if she hadn't, she would otherwise have talked with
  friends. The opportunity cost of attending the movie is
  A) talking with friends *and* studying.   B) two hours of time.
  C) studying.   D) talking with friends.

 Answer: D

208) When the government hires people to serve in the army, these people are no longer available to do 208) _____
  other work. This choice illustrates the concept of
  A) marginal benefit.   B) opportunity cost.
  C) a social interest/private interest conflict.   D) an incentive.

 Answer: B

209) When the government chooses to spend the tax dollars that it collects on homeland security, its choice _____.

    A) illustrates that scarcity does not always exist

    B) primarily affects who gets the goods and services produced.

    C) involves a tradeoff of other goods and services such as education for more homeland security

    D) involves no tradeoff because the defense is necessary

Answer: C

<div style="text-align:right">209) _____</div>

210) Making a choice at the margin means _____.

    A) letting someone else choose for you

    B) making a choice by comparing the total benefit and the total cost

    C) deciding to do a little bit more or a little bit less of an activity

    D) waiting until the last minute to make a choice

Answer: C

<div style="text-align:right">210) _____</div>

211) Suppose that for the past two months, you have studied economics one hour a day. You now decide to study economics two hours a day. For the past two months, _____.

    A) the opportunity cost of studying economics must have risen.

    B) your marginal benefit from studying economics an hour must have been greater than its marginal cost

    C) your marginal cost of studying economics for an hour must have exceeded its marginal benefit

    D) the marginal cost of studying economics must have fallen

Answer: B

<div style="text-align:right">211) _____</div>

212) In economics, positive statements are about

    A) the way things ought to be.

    B) macroeconomics, not microeconomics.

    C) microeconomics, not macroeconomics.

    D) the way things are.

Answer: D

<div style="text-align:right">212) _____</div>

213) A positive statement is

    A) about what is.

    B) valid only in the context of a model with simple assumptions.

    C) the result of a model's normative assumptions.

    D) about what ought to be.

Answer: A

<div style="text-align:right">213) _____</div>

214) A positive statement is

    A) about what ought to be.

    B) always true.

    C) about what is.

    D) one that does not use marginal concepts.

Answer: C

<div style="text-align:right">214) _____</div>

215) A positive statement

    A) is a statement of what is.

    B) is an affirming statement that is strongly worded.

    C) cannot be tested by checking it against the facts.

    D) is a statement of what ought to be.

Answer: A

<div style="text-align:right">215) _____</div>

216) Which of the following are true regarding "positive" statements?   216) _____
    I.   They describe what "ought to be."
    II. They describe what is believed about how the world appears.
    III. They can be tested as to their truthfulness.
    A) I, II and III.   B) I and III.   C) I and II.   D) II and III.
    Answer: D

217) Positive and normative statements differ in that   217) _____
    A) positive statements can be tested, whereas normative statements cannot.
    B) normative statements can be tested, whereas positive statements cannot.
    C) normative statements never use the word "should."
    D) normative statements depict "what is" and positive statements depict "what ought to be."
    Answer: A

218) A positive statement is a statement about   218) _____
    A) what should be but is not.   B) what is and what should be.
    C) what is.   D) what is desirable.
    Answer: C

219) Positive economic statements   219) _____
    A) can be tested against the facts.   B) prescribe what should be.
    C) cannot be tested against the facts.   D) are related only to microeconomics.
    Answer: A

220) Which of the following is a positive statement?   220) _____
    A) An unemployment rate of 9 percent is a national disgrace.
    B) Unemployment is a more important problem than inflation.
    C) Unemployment and inflation are equally important problems.
    D) When the national unemployment rate is 9 percent, the unemployment rate for inner-city
       youth is often close to 40 percent.
    Answer: D

221) Which of the following is a positive statement?   221) _____
    A) A 5 percent increase in income leads to a 3 percent increase in the consumption of orange
       juice.
    B) The United States should fight inflation even if it raises unemployment.
    C) What to do with Social Security is the most important economic issue today.
    D) Because they decrease productivity, labor unions should be eliminated.
    Answer: A

222) Which of the following is a positive statement?   222) _____
    A) The government ought to provide health care to everyone.
    B) Corporations should be more socially responsible.
    C) The distribution of income is fair.
    D) People buy more of a good or service when its price falls.
    Answer: D

223) Which of the following is <u>NOT</u> a normative statement? 223) _____
    A) People buy more of a good or service when its price falls.
    B) The government ought to provide health care to everyone.
    C) The distribution of income is fair.
    D) Corporations should be more socially responsible.

Answer: A

224) A normative statement concerns 224) _____
    A) a value judgment.   B) what is correct.
    C) what is provable.   D) what is incorrect.

Answer: A

225) Normative economic statements 225) _____
    A) describe the process of economic policy-making.
    B) describe what ought to be.
    C) deal with economic hypotheses that are not well-established laws.
    D) describe what is rather than what ought to be.

Answer: B

226) The statement that "peach ice cream is better than chocolate ice cream" 226) _____
    A) can be tested using the scientific approach.
    B) is a normative statement.
    C) provides a basis for predicting which type of ice cream will exhibit the most sales.
    D) is a positive statement.

Answer: B

227) The statement "Unemployment should be kept at or below a level of 6 percent" is 227) _____
    A) a positive statement.   B) a normative statement.
    C) an assumption.   D) a prediction.

Answer: B

228) Which of the following is an example of a positive statement? 228) _____
    A) Government should not redistribute income.
    B) The foreign sector should be more tightly controlled.
    C) Business firms ought to contribute more to charities.
    D) Households are the primary source of saving.

Answer: D

229) Which of the following is an example of a positive statement? 229) _____
    A) We should cut back on our use of carbon-based fuels such as coal and oil.
    B) Every American should have equal access to health care.
    C) The Federal Reserve ought to cut the interest rate.
    D) Increasing the minimum wage results in more unemployment.

Answer: D

230) Which of the following is a positive statement? 230) _____
    A) A 10 percent increase in income leads to a 4 percent increase in the consumption of beef.
    B) My economics class should last for two terms because it is my favorite class.
    C) Given their negative impact on productivity, the government should eliminate labor unions.
    D) Taxes should be lower because then people get to keep more of what they earn.

Answer: A

231) Which of the following is a positive statement?   231) _____
   A) Our planet is warming because of an increased carbon dioxide buildup in the atmosphere.
   B) A minimum wage of $5.50 per hour is a shame for a rich country like the United States.
   C) Both these statements are positive.
   D) Neither of these statements is positive.

   Answer: A

232) When Al makes the statement, "The cost of living has increased 10 percent over the past 10 years,"   232) _____
   he is
   A) testing an economic model.   B) making a positive statement.
   C) making a normative statement.   D) facing the standard of living tradeoff.

   Answer: B

233) Which of the following is a positive statement?   233) _____
   A) State lotteries are good methods to use for raising revenues.
   B) An increase in gas prices leads people to carpool more.
   C) Increased prison sentences are the best way to reduce the crime rate.
   D) Inflation is a more serious problem than is deflation.

   Answer: B

234) The statement "Managers with a college education earn $18 an hour while ski instructors who did   234) _____
   not complete college earn $10" is
   A) an ethical statement.   B) a positive statement.
   C) a normative statement.   D) a political statement.

   Answer: B

235) The statement "An increase in the price of gasoline will lead to a decrease in the amount purchased"   235) _____
   is
   A) a political statement.   B) a positive statement.
   C) a scientific statement.   D) a normative statement.

   Answer: B

236) Which of the following is a positive statement?   236) _____
   A) The best level of taxation is zero percent because then people get to keep everything they
      earn.
   B) The government must lower the price of a pizza so that more students can afford to buy it.
   C) My economics class should last for two terms because it is my favorite class.
   D) An increase in tuition means fewer students will apply to college.

   Answer: D

237) Which of the following is a positive statement?   237) _____
   A) Low rents are good because they make apartments more affordable.
   B) Low rents decrease the amount of housing landlords make available for rent.
   C) Owners of apartment buildings ought to be free to charge whatever rent they want.
   D) Housing costs too much.

   Answer: B

238) The statement "The unemployment rate for teens is higher than that for adults" is   238) _____
   A) a political statement.   B) a normative statement.
   C) an ethical statement.   D) a positive statement.

   Answer: D

239) The statement "Prices rise more in countries with rapid growth in the money supply" is 239) _____
    A) an ethical statement.   B) a political statement.
    C) a positive statement.   D) a normative statement.

    Answer: C

240) Statements about what ought to be are called 240) _____
    A) assumptions.   B) implications.
    C) normative statements.   D) positive statements.

    Answer: C

241) Normative statements are statements about 241) _____
    A) what is.   B) what ought to be.
    C) prices.   D) quantities.

    Answer: B

242) A normative statement is 242) _____
    A) one that does not use marginal concepts.   B) about what is.
    C) always true.   D) about what ought to be.

    Answer: D

243) In economics, normative statements are about 243) _____
    A) the way things are.   B) the way things ought to be.
    C) marginal costs, not marginal benefits.   D) marginal benefits, not marginal costs.

    Answer: B

244) Which of the following is a normative statement? 244) _____
    A) You should eat less candy.
    B) The price of candy bars is $1.25 each.
    C) Popcorn and candy are sold in movie theaters.
    D) Candy bars are more expensive than newspapers.

    Answer: A

245) Which of the following is a normative statement? 245) _____
    A) The unemployment rate rose last month.
    B) The unemployment rate is too high.
    C) Forty percent of the public believes that the unemployment rate is too high.
    D) all of the above

    Answer: B

246) Which of the following is a normative statement? 246) _____
    A) The United States has a comparative advantage compared to the European Union in the
       production of wheat.
    B) The main reason why the United States has a trade deficit with China is because China's trade
       practices are unfair.
    C) Both these statements are normative.
    D) Neither of these statements is normative.

    Answer: B

247) At least 7 out of every 10 economists agree with the following propositions. Which of these propositions is normative?
    A) The redistribution of income is a legitimate role for the U.S. government.
    B) Cash payments to welfare recipients make them better off than do transfers-in-kind of equal cash value.
    C) Tariffs and import restrictions make most people worse off.
    D) Rent controls cut the availability of housing.

247) _____

Answer: A

248) "Government should act to reduce poverty levels."
    A) This statement is an example of the fallacy of composition.
    B) This statement is a normative statement.
    C) This statement is a positive statement.
    D) This statement is an example of the *post hoc* fallacy.

248) _____

Answer: B

249) When Susan makes the statement, "The government should spend less money to take care of national parks," she is
    A) making a positive statement.   B) facing the standard of living tradeoff.
    C) making a normative statement.   D) testing an economic model.

249) _____

Answer: C

250) "All children should have health insurance" is a
    A) fallacy of composition   B) positive statement
    C) *post hoc* fallacy   D) normative statement

250) _____

Answer: D

251) "The rich should pay higher income tax rates than the poor" is an example of a
    A) normative statement.   B) descriptive statement.
    C) theoretical statement.   D) positive statement.

251) _____

Answer: A

252) Which of the following is a normative statement?
    A) Studying more hours leads to an increase in your GPA.
    B) Taking extra vitamin C prevents catching a cold.
    C) States should require all motorcycle riders to wear helmets to reduce the number of riders killed.
    D) An increase in tax rates means people work fewer hours.

252) _____

Answer: C

253) Which of the following is a normative statement?
    A) Owners of apartment buildings are free to charge whatever rent they want.
    B) Low rents are good because they make apartments more affordable.
    C) Low rents will restrict the supply of housing.
    D) Housing costs are rising.

253) _____

Answer: B

254) Which of the following is an example of a normative statement? 254) _____
    A) Households should save more.
    B) Household consumption is the largest component of spending.
    C) Government spending rose in the 1990s.
    D) The business sector is the primary source of jobs.

    Answer: A

255) Which of the following is a normative statement? 255) _____
    A) The government's cuts in welfare spending impose an unfair hardship on the poor.
    B) Next year's inflation rate will be under 4 percent.
    C) The current butter surplus is the result of federal policies.
    D) Consumers will buy more gasoline over the Christmas holiday even if the price of gas is 10
       cents higher than it was during the Thanksgiving holiday.

    Answer: A

256) Suppose that an economist tells you that people in the United States do not save enough out of their 256) _____
    incomes. This is an example of _____ statement.
    A) a *ceteris paribus*   B) an autonomous   C) a normative   D) a positive

    Answer: C

257) Economic models 257) _____
    A) simplify reality.
    B) include all relevant facts.
    C) are essentially different from those used in other sciences.
    D) always use graphs.

    Answer: A

258) A good economic model 258) _____
    A) should not include more than two variables.
    B) describes every aspect of the economic world, with no exception.
    C) includes all those features of the world that can be described numerically.
    D) includes only those features of the world that are needed for the purpose at hand.

    Answer: D

259) An economic model is 259) _____
    A) a statement that describes how the world should be.
    B) a collection of facts that describe the real world.
    C) a description of some aspect of the economic world that includes only those features of the
       world that are needed for the purpose at hand.
    D) a generalization that summarizes all the normative assumptions we make about a particular
       issue.

    Answer: C

260) A normative statement is 260) _____
    A) one that does not use the *ceteris paribus* clause.
    B) about what is.
    C) about what ought to be.
    D) always true.

    Answer: C

261) Which of the following is a positive statement?   261) _____
    A) An increase in the price of pizza will lead fewer students to buy pizza.
    B) The government should spend more on education.
    C) The government must provide health insurance so that the poor can obtain decent medical
       treatment.
    D) My favorite dinner is pizza and soda.
    Answer: A

262) An economic model includes   262) _____
    A) no use of marginal concepts.
    B) all known details in order to increase its accuracy.
    C) only details considered essential.
    D) only normative statements.
    Answer: C

263) The statement that _____ is a positive statement.   263) _____
    A) the price of sugar in the United States is higher than the price in Australia
    B) too many people in the United States have no health care insurance
    C) more students should study economics
    D) the price of gasoline is too high
    Answer: A

264) Ben Bernanke, Chairman of the Federal Reserve, must choose whether to meet with the Secretary of   264) _____
the Treasury or Congress regarding the financial crisis. This reflects the
    A) fact that Bernanke responds to incentives   B) fact that Bernanke faces scarcity.
    C) use of capital.   D) concept of entrepreneurship.
    Answer: B

265) When the president of the Bank of America addresses Congress regarding lending standards in that   265) _____
industry, he is discussing
    A) incentives.   B) a macroeconomic topic.
    C) a microeconomic topic.   D) the big tradeoff.
    Answer: C

266) When Ben Bernanke, Chairman of the Federal Reserve, addresses Congress regarding the United   266) _____
States' role in the world economy, he is discussing
    A) a microeconomic topic.   B) incentives.
    C) a macroeconomic topic.   D) scarcity.
    Answer: C

267) Dell Computers decides to produce PCs and sell them directly over the Internet and via BestBuy.   267) _____
This is an example of
    A) incentives   B) a macroeconomic decision.
    C) a microeconomic decision   D) scarcity.
    Answer: C

268) In 2008, China chose to allow its peasant farmers to have right to rent out their land. China hopes that these farmers will

    A) act in the social interest.
    B) act in their self-interest.
    C) respond to incentives and increase agricultural output.
    D) all of the above.

Answer: D

268) _____

269) Consider the following events:
    i.   Samsung hires associates to market their HDTV sets to BestBuy.
    ii.   The Dallas Cowboys build a new football stadium.
    iii.   Ebay fires 10 percent of its workforce.
    iv.   Ten million stocks were traded on the New York Stock Exchange in one day.
    v.   Pennsylvania builds a new state park.

Which of the events describe use of factors of production.?
    A) ii, iv, and v.   B) i and iii only.   C) iv only.   D) i, ii, iii, and v.

Answer: D

269) _____

270) Panasonic sends its HDTV salespeople to training sessions. This is an example of
    A) a macroeconomic decision.
    B) scarcity.
    C) entrepreneurship.
    D) a firm investing in workers' human capital

Answer: D

270) _____

271) When BestBuy chooses to devote more sales space to HDTV sets than to computers, BestBuy
    A) answers a macroeconomic question.   B) answers the *for whom* question
    C) answers the *what* question.   D) doesn't face a trade off.

Answer: C

271) _____

272) When CBS decides to produce another season of a reality show instead of a new drama series, CBS
    A) answers the *how* question.
    B) answers the *what* question.
    C) doesn't face a trade off because there is unlimited air time.
    D) doesn't face scarcity because there are plenty of actors looking for work.

Answer: B

272) _____

273) When Delta Airlines encourages flyers to book their trips online versus making phone reservations, it is
    A) facing natural resource depletion.
    B) making a choice in the social interest only,.
    C) answering the *how* question.
    D) answering the *what* question.

Answer: C

273) _____

274) When the Target Pharmacy offers automatic refills of prescriptions versus coming into the store and ordering through the pharmacist, it is
    A) answering the *for whom* question.   B) answering the *how* question.
    C) making a choice in its self-interest only.   D) facing globalization.

Answer: B

274) _____

275) When the New York Jets pay their new player a signing bonus of $10 million, the team is answering

    A) the *what* question.
    B) the *how* and *what* questions.
    C) the *for whom* question.
    D) the *how* question.

275) _____

Answer: C

276) Barack Obama supports raising income taxes paid by the highest-income Americans and John McCain supports maintaining the current income tax structure. The presidential candidates are ans the _____ question.

    A) *how*
    B) *for whom*
    C) microeconomic
    D) *what*

276) _____

Answer: B

277) When Target decides to hire another sales clerk to handle the holiday rush, Target assumes that the clerk's extra sales are greater than the costs of hiring the new clerk. This is an example of

    A) the big tradeoff.
    B) answering the *how* question.
    C) answering the *what* question.
    D) making a decision at the margin.

277) _____

Answer: D

278) "When OPEC increases the supply of oil to the market, the price of gasoline falls." This is an example of

    A) a normative statement.
    B) a positive statement.
    C) a macroeconomic statement.
    D) the big tradeoff.

278) _____

Answer: B

279) "As part of the financial crisis bailout plan in 2008, the Federal Reserve will buy equity stakes in banks. This will result in an increase in the inflation rate." This is an example of

    A) the big tradeoff.
    B) a microeconomic statement.
    C) a normative statement.
    D) a positive statement.

279) _____

Answer: D

280) "As part of the financial crisis bailout plan in 2008, the Federal Reserve should not bail out banks that made risky loans." This is an example of

    A) the big tradeoff.
    B) opportunity costs.
    C) a normative statement.
    D) a positive statement.

280) _____

Answer: C

281) "OPEC should supply more oil so that the world's economies can grow more rapidly." This is an example of

    A) the big tradeoff.
    B) a positive statement.
    C) a decision at the margin.
    D) a normative statement.

281) _____

Answer: D

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

282) What do economists mean when they discuss "scarcity"?

Answer: Scarcity occurs whenever people's wants exceed the ability of the available resources to meet these wants. Because people's wants are effectively infinite—it is always possible to imagine more good things to want to have—wants will always exceed what can be produced with the available resources, and so scarcity will always be present.

283) What is the relationship between wants, factors of production, scarcity, and choices? Discuss the relationship for an individual and for a society.

Answer: A person faces scarcity whenever his or her wants exceed what he or she can obtain using his or her resources. Because the person cannot fulfill all of his or her wants, the person is forced to choose which wants will be satisfied and which wants will remain unsatisfied. The same results hold true for a society. All societies face scarcity because people's wants are essentially infinite, so that the factors of production available are not sufficient to fulfill everyone's wants. Because of this fact, societies must make choices about which (and whose) wants will be satisfied and which (and whose) wants will remain unsatisfied.

284) Why do economists say that even very rich people face scarcity?

Answer: A person faces scarcity whenever his or her wants exceed what he or she can obtain using his or her resources. Even very rich people want things that they cannot have. An older rich person, for instance, might want to have all of his or her youthful energy, but medical science cannot (yet) provide this service. Alternatively, another rich person might enjoy life so much that he or she wants 25 hours in a day in order to have more time for more enjoyment. But, such a want is impossible. By way of another, perhaps more realistic example, Malcolm Forbes was the founder of *Forbes* magazine and was very rich. However, he did not win every piece of art that he bid upon at auctions. Even though Mr. Forbes was very rich, he still passed on some art when the price got so high that he thought given his resources, the price exceeded what he was willing to pay. Mr. Forbes wanted the art, but he was not willing to bid higher in order to win it. Mr. Forbes faced scarcity.

285) Explain why both rich and poor people experience scarcity.

Answer: Scarcity exists when people's wants exceed their ability to satisfy the wants. People's wants are literally infinite, so just as a poor person can want more, so too can a richer person. Therefore both rich and poor experience scarcity.

286) What is the difference between scarcity and poverty?

Answer: Scarcity exists when availability is less than people want. Poverty exists when availability is less than people need. Everyone suffers scarcity; only an unfortunate minority suffers poverty.

287) Define economics and describe its branches of study.

Answer: Economics is the social science that studies the choices made by individuals, businesses, government, and entire societies as they cope with scarcity. It has two branches, microeconomics and macroeconomics. Microeconomics is the study of the choices made by individuals and businesses, the way they interact, and the influence that governments exert on these choices. Macroeconomics is the study of the aggregate (total) effects on the national economy and the global economy of the choices that individuals, businesses, and governments make.

288) What is the difference between microeconomics and macroeconomics?

Answer: Microeconomics studies the decisions of smaller economic actors, such as individual consumers or individual firms, and how the government can affect these decisions, say through how it regulates an industry. Macroeconomics studies the aggregate, or economy-wide, consequences of the decisions made by individuals and firms. Macroeconomics also studies the aggregate effects of government policies, such as the Federal Reserve's decisions to raise or lower interest rates.

289) What is the difference between microeconomics and macroeconomics? Give an example of an issue each studies.

Answer: Essentially microeconomics studies individual units within the economy, such as the choices made by individual consumers or individual firms. Macroeconomics studies the overall or aggregate economy. Microeconomics examines the factors that affect employment at an individual firm. Macroeconomics examines the factors that affect economy-wide unemployment.

290) Below is a student's answer to the question "What is microeconomics?" If you were the instructor, how would you correct the student's answer?
"Microeconomics is the study of how government influences the choices made by individuals and businesses and performance of the whole national economy."

Answer: The answer is partially correct. Microeconomics is the study of the choices that individuals and businesses make, the way these choices interact in markets, and the influence of the government. But the performance of the national economy is the subject of macroeconomics, not microeconomics.

291) China's population is about 1.5 billion, while the population of the United States is about 300 million. This fact means that China has much more human capital than the U.S. does. True or false? Explain your answer.

Answer: False. Population can measure the quantity of a nation's labor resource, but the population numbers don't tell us anything about skills that this labor force obtained from education, on-the-job training, and work experience, which are called human capital. Thus, the population numbers in the statement only tell us that China is likely to have more labor than the United States, but it does not necessarily mean that it also has more human capital.

292) Explain what entrepreneurship is and why it is considered a factor of production.

Answer: Entrepreneurship is the resource (the people) that runs businesses. Entrepreneurs organize the other resources, land, labor, and capital. It is a factor of production because people with the desire and talent to successfully organize a business are needed to run businesses.

293) An analyst on a local news channel argues that the recent corporate scandals "demonstrated very clearly that self interest always contradicts social interest." Do you agree or disagree? Substantiate your answer.

Answer: You should disagree. The recent corporate scandals only show that self interest *might* contradict social interest. But they don't prove that this is *necessarily* the case as we can find many real-world examples of how people guided by self-interest promote society's well-being. In fact, under the market system the whole economy operates through the decisions made by self-interested individuals. And countries such as the United States have proven to be more successful in promoting social interest than were centrally planned, or communist, economies where people's self interest was suppressed and all important economic decisions were made by government.

294) What is a tradeoff? Give an example.

Answer: A tradeoff occurs when one thing must be given up to get another. Tradeoffs are pervasive; at the personal level, students tradeoff time spent studying for time they otherwise could have spent socializing.

295) What is opportunity cost?

Answer: Opportunity cost is the highest-valued alternative given up when selecting an action. For instance, the opportunity cost of studying an hour is whatever the highest-valued alternative would have been for the hour spent studying.

296) What is an opportunity cost? Give an example of an opportunity cost that is paid in money and an opportunity cost that is not explicitly paid. For each example, explain why you think this is an opportunity cost.

Answer: The opportunity cost of something is the highest-valued alternative you give up to get it. An example of an opportunity cost paid in money is the cost of tuition that a student pays to get his or her college degree. This expenditure is an opportunity cost because to get a college degree, the student gives up goods and services that he or she would have bought for the money spent on tuition. If this student quits a job to go to college, the student also gives up the money he or she could have earned working (and hence the goods or services the student could have purchased). This opportunity cost is an example of an opportunity cost that is not explicitly paid in money.

297) Your friend is preparing for this exam and in your practice session makes the following statement: "Instead of attending microeconomics class for two hours, Kiki could have played tennis or watched a movie. Therefore, the opportunity cost of attending class is the tennis and the movie she had to give up." Is your friend's analysis correct or not? Explain your answer.

Answer: Your friend's analysis is incorrect. The opportunity cost of an action is the highest-valued alternative forgone, not *all* alternatives forgone. Kiki's opportunity cost of studying for her exam is either the tennis or the movie, whichever she would have done had she not studied.

298) Rather than go out to eat by yourself, you decide to stay at home and fix dinner for yourself and your two roommates. Your roommates applaud your decision. Your first roommate tells you that your decision to eat at home has no opportunity cost because you already have all the dinner ingredients in your pantry. Is this roommate's comment correct?

Answer: Your first roommate's comment is incorrect. The opportunity cost of preparing dinner at home is whatever is the highest-valued alternative forgone, which, given your choice boiled down to staying home or going out, is going out to eat. Hence the opportunity cost of fixing dinner at home is going out to eat.

299) A student can spend the next hour studying for a finance test, hiking along the Oregon coast, watching a rerun of *Buffy the Vampire Slayer* on television, or napping. If the student decides to study, what is the opportunity cost of her choice: hiking, watching television, or napping?

Answer: With the information given, it is impossible to determine the opportunity cost. The opportunity cost is the highest-valued alternative forgone and the problem does not give the student's ranking of the options. For instance, if the student thinks that if she had not studied she would have watched *Buffy*, then watching *Buffy* is the opportunity cost. However, if the student thinks that if she were not studying, she would be strolling along the beach, then the beach walk is the opportunity cost.

300) Define marginal cost and marginal benefit.

Answer: Marginal cost is the opportunity cost of an increase in an activity. Marginal benefit is the benefit of an increase in an activity.

301) What is the difference between a total benefit and a marginal benefit?

Answer: The total benefit is *all* the benefit from *all* of an activity. The marginal benefit is the *additional* benefit from an *additional* amount of an activity.

302) In New State, the bottling law requires that people get a refund of five cents when they return an empty bottle or can. Why does the state pay people to return bottles? In your answer, be sure to mention the role played by incentives.

Answer: Policy makers know that people making choices respond to incentives. Instead of throwing away bottles and cans, people will now bring the used bottles and cans to the designated areas for recycling in order to receive their payment. Thus policy makers have taken advantage of people's decision making by increasing the marginal benefit of returning bottles in order to reduce litter and clean the environment.

303) If the government raises the tax on cigarettes, what is the effect on people's incentives and choices?

Answer: The government raises the tax on cigarettes to discourage smoking. With a higher tax the price of cigarettes rises. The opportunity cost of smoking increases, which gives people incentive to cut their consumption of cigarettes.

304) What is the difference between positive and normative statements?

Answer: Positive statements tell what is and normative statements tell what ought to be. Positive statements can be tested to determine if they are correct or not, while normative statements use value judgments and so cannot be tested. For example, two economists might agree on the positive assertion that if the government spent its funds purchasing pharmaceutical drugs for poor older Americans rather than poor children, then poor older Americans would use more drugs and poor children would use fewer. But they might disagree on the normative conclusion of whether the government should pursue this policy. One economist might argue "It is not fair to have senior citizens suffer because they cannot afford medicine" and the other economist might argue "It is not fair to have children suffer because their parents cannot afford medicine."

305) "The difference between positive and normative statements is that a positive statement is always true while a normative statement might or might not be true." True or false? Explain.

Answer: False. The difference between positive and normative statements is that a positive statement is about what *is*, while a normative statement is about what *ought to be*. A positive statement can be tested against the facts and may be proved to be right or wrong, whereas a normative statement depends on values and cannot be tested.

306) Two economists can agree that raising the minimum wage creates unemployment yet one might argue that raising the minimum wage is a good policy and the other that it is a bad policy. Why can this difference exist? Be sure to use the terms positive and normative in your answer.

Answer: Positive statements are statements that describe how the world is. Positive statements can be tested and so, ultimately, any disagreements about positive statements should be resolved. The statement that "Raising the minimum wage creates unemployment" is a positive statement and, on the basis of repeated testing, most economists agree that it is a correct positive statement. Normative statements, however, are statements that describe how the world ought to be. Normative statements depend on people's values and cannot be tested. So one economist might argue that raising the minimum wage is a good policy because this economist thinks that, although it is unfortunate that some people lose their jobs, the fact that others retain their jobs and their wages rise more than outweighs the harm created by the unemployment. Another economist might strongly differ because the second economist thinks that the harm inflicted on people who lose their jobs more than outweighs any good from some workers being paid more. This difference of opinion can last indefinitely because there is no way to test the two economists' beliefs to determine which is correct.

307) What is a positive statement? Give an example.

Answer: A positive statement addresses "what is" and can be tested. An example of a positive statement is "An increase in the price of gas decreases the quantity of gas demanded."

308) Explain whether the statement, "There is life on Mars," is a normative or positive statement.

Answer: The statement is a positive statement because it does not depend on a value judgment. Instead, it is a statement that tries to describe "what is" and hence is testable. Of course, in order to test the assertion, it would be necessary to go to Mars to ascertain if there is life present. While it is difficult (!) at present to actually carry out the test, nonetheless the statement is testable and hence is a positive statement.

309) Explain whether the statement, "Hillary Clinton was elected President of the United States in 2008," is a normative or positive statement.

Answer: The statement is a positive statement because it does not depend on a value judgment. Instead, it is a statement that tries to describe "what is" and hence is testable. Now, it is indeed the case that Hillary Clinton was not elected president in 2008, so when we test the statement we discover that it is incorrect. But, whether the statement is correct or not has *no* bearing on whether the statement is positive or normative. Thus, the statement "Hillary Clinton was elected President in 2008" is a positive, albeit incorrect, statement.

310) What is a normative statement? Give an example.

Answer: A normative statement is a statement about what ought to be. It is a value judgment or opinion and so cannot be proven true or false. An example of a normative statement is "Students should attend school year round to receive a better education."

311) Explain whether the statement "The government should increase tariffs on Japanese cars to protect the American car industry from competition," is a normative or positive statement.

Answer: The statement is normative. The statement is a normative statement because it depends on a value judgment, namely that the government should protect the American car industry from competition.

312) Suppose you are working four nights per week at your courses and your grade point average is 3.5. You want a higher grade and decide to study an extra night each week. Your GPA now rises to 3.8. What is your marginal benefit from studying for one additional night a week?

Answer: Marginal benefit is the benefit that arises from an increase in an activity. Your marginal benefit is the 0.3 increase in your grade. It's not the 3.8 grade because you already have the benefit from studying for four nights a week and should not count this benefit as resulting from the decision you are now making.

313) Jerry is studying three nights per week and his grade point average is 3.1. He wants a higher GPA and decides to study an extra night each week. His GPA now rises to 3.5. Had Jerry not decided to study an extra night, he would have spent this night with his friends. What is Jerry's marginal benefit from studying for one additional night a week? What is his marginal cost of increasing the study time by one night per week? Why does Jerry decide to study an extra night?

Answer: Marginal benefit is the benefit that arises from an increase in an activity. Jerry's marginal benefit is the 0.4 increase in his grade. Marginal cost is the opportunity cost of an increase in an activity. Jerry's marginal cost is a night spent with his friends that he gives up. Jerry decides to stud an extra night because he values the marginal benefit from it (the 0.4 increase in his grade) more highly than its marginal cost (a night spent with his friends).

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

314) Scarcity applies to both the rich and the poor. 314) _____

    Answer: ● True   False

315) Rich people don't have to deal with scarcity. 315) _____

    Answer: True   ● False

316) Scarcity affects only those who are in need. 316) _____

    Answer: True   ● False

317) Scarcity arises because of opportunity costs. 317) _____

    Answer: True   ● False

318) Microeconomics is the study of topics such as national production and unemployment.

Answer: True   ● False

318) _____

319) Macroeconomics is the study of aggregate variables such as national production and unemployment.

Answer: ● True   False

319) _____

320) The tools, instruments, machines, and buildings that people use to produce goods and services are called human capital.

Answer: True   ● False

320) _____

321) Most income in the United States is earned by business owners as profit.

Answer: True   ● False

321) _____

322) The United States produces more services than goods.

Answer: ● True   False

322) _____

323) A country using mainly labor to build a dam instead of using mainly machines is answering the "how" question.

Answer: ● True   False

323) _____

324) When a business increases its workers' wages, it is answering the "what" question.

Answer: True   ● False

324) _____

325) The new products and processes introduced during the Information Revolution of the last twenty years were a result of a successful implementation of a strategic economic plan designed by the U.S. government.

Answer: True   ● False

325) _____

326) When I buy an $8.00 movie ticket rather than two paperback books, the opportunity cost of going to the movie is the two paperback books I did not buy.

Answer: ● True   False

326) _____

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

327) Suppose you plan to go to school this summer. The cost of tuition and textbooks is $1,400 and housing, board, and entertainment will cost you $500. If you didn't go to school, you'd live in your parents' house for free, but your other living expenses would be about the same. Also, if you didn't go to school you'd work full time and could earn $8,000. You can still work part time while attending the summer school, but you will earn only $3,000.
   a)   What will the summer school cost you in terms of money explicitly paid?
   b)   What are the opportunity costs of going to summer school that you don't pay explicitly? Explain.
   c)   What is your total opportunity costs of going to school this summer? Explain your answer.

   Answer: a)   You explicitly pay the cost of tuition and textbooks ($1,400) and the cost of housing ($500), so your total explicit costs are $1,900.
   b)   Your opportunity cost is what your give up to go to summer school. You forego a fulltime job, at which would earn $8,000, in exchange for a part-time job, where you earn $3,000, which means you give up $5,0 Although you don't pay this money explicitly, you lose the opportunity to earn it and so it's an opportunit of attending summer school.
   c)   First, your opportunity cost includes the cost that you pay explicitly ($1,900), which you have to pay o you go to school. If you decide not to go to school, you can use this money to buy something else—an opportunity you are giving up. Second, as explained in the previous part, you are also giving up $5,000, although not paying this money explicitly. So your full opportunity cost of going to school is $1,900 + $5,000 = $6,900.

328) Jane is deciding whether to go to school for 8 weeks this summer. The cost of tuition and textbooks is $1,700 and housing and other expenses will cost her $600. If she does not go to school, she will live in her parents' house for free and they will cover her food and other expenses for her. Also, if Jane does not go to summer school she could work fulltime. But the best job she can get pays only $600 per week, and Jane would only agree to give up free time for no less than $750 per week. However, if she goes to summer school, she'll have to spend 40 hours a attending classes and studying.
   a)   What will the summer school cost Jane in terms of money spent?
   b)   What are the opportunity costs of going to summer school that Jane does not pay explicitly? Explain.
   c)   What is Jane's total opportunity cost of going to school this summer? Explain your answer.
   d)   Suppose that if Jane does not go to summer school, she will eventually take the classes anyway. What is Jane marginal benefit of going to summer school?
   e)   Suppose Jane decides to go to school in the summer. Explain her decision using the concepts of marginal cos marginal benefit.

   Answer: a)   Jane explicitly pays the cost of tuition and textbooks ($1,700) and the cost of housing ($600), so her total explicit costs are $2,300.
   b)   Jane's opportunity cost is what she gives up (her best alternative forgone) to go to summer school. In t case she foregoes 40 hours per week of her free time, which she values more highly then the income from best job she could find. To place a dollar value on this time, notice that the value that she places on this tim is the amount of money she is willing to accept to give it up: $750 per week. So for the eight weeks, her free time has a value of $750 × 8 = $6,000. Although she does not pay $6,000 explicitly, she gives up this va of her free time and hence it's an opportunity cost to her.
   c)   Jane's total opportunity cost includes the cost that she pays explicitly, $2,300, which she has to pay onl goes to school. Also, as explained in the previous part, Jane is giving up the value of her free time, $6,000. her full opportunity cost of going to school is $2,300 + $6,000 = $8,300.
   d)   Jane's marginal benefit of going to summer school is the possibility of getting her degree faster. For in: if the summer school allows her to graduate one semester earlier, she can start to work and earn income ea The additional income and work experience that she gets because of her earlier graduation is what she gai she decides to go to school in the summer.
   e)   Jane decides to go to school in the summer if her marginal benefit from this decision, the value of extra income and work experience that she gets if she graduates earlier, is greater than the marginal cost of her summer school, $8,300.

45

329) Suppose Canon Inc. decided to invest 45 billion yen in developing and launching a new model of its digital camera, expecting that it will bring additional sales of 60 billion yen. The company has already invested 38 billion yen when the marketing department suddenly finds out that the introduction of a similar camera by Sony will reduce Canon's expected additional sales to 30 billion yen. The company's management is trying to decide whether to continue investing in the new product or close the project. Canon hires you as an economic consultant. So, think like an economist to help the company's management make their decision:

a) At this point in time, what is Canon's marginal cost of introducing the new product?

b) What is Canon's marginal benefit from introducing the new product?

c) Will you advise Canon to finish the project and introduce the new product? Why or why not? What principles of economic thinking will help you analyze the situation and make the right choice?

Answer: a) Canon's marginal cost is the additional investment needed to finish the project, which is 7 billion yen.

b) Canon's marginal benefit is the benefit that arises from the new product, the additional revenue from which in the changed situation is expected to be 30 billion yen.

c) The principle of choosing at the margin will help. According to this principle, the amount of money already spent is irrelevant to the decision you are making now. That is, you should only consider the marginal costs and marginal benefits that will result from the decision in question. Now, if Canon goes ahead, finishes the project and introduces the new camera, it will cost them additional 7 billion yen, but they will gain additional sales of 30 billion yen. The marginal benefit of introducing the new product exceeds the marginal cost, which means the company should invest 7 billion yen to finish development and introduce the new product. Notice also that if Canon abandons the project, there will be no additional money costs, but the opportunity cost will be the additional sales (30 million yen) that the company is potentially losing. Thus, the concept of opportunity cost also helps to clarify the situation.

330) Your student association is looking for an auditorium to rent for an all-day conference. The university's Performing Arts Center is vacant on that day, so the association wants to rent it. The physical plant manager tells you that the daily rent is $660, which includes $400 to cover part of the cost paid to build the Center, $40 to cover part of its regular maintenance cost, $50 to help pay for the building's insurance, $100 to cover the extra cost of electricity that the university would incur because of the conference, and $70 to pay for additional janitorial services for the conference. You know that no one else wants to rent the Center on that day and you think that the [rent] that the manager charges is too high. But how much should you pay? Use the economic way of thinking to answer [the] question and to convince the manager to accept your offer:

a) If you rent the Center, what will be the university's marginal cost of renting the center to you?

b) If you rent the Center, what will be the university's marginal benefit of renting the center to you?

c) What amount of rent should you offer? Convince the manager to accept your offer.

Answer: a) The university's marginal cost is $170. These are the extra cost of electricity ($100) and janitorial servic[es] that the university will only pay if you rent the Center. The costs of building the Center, insurance, and reg[ular] maintenance costs are not extra costs incurred because you rent the Center. The university has already pai[d for] building it and pays the cost of insurance and regular maintenance no matter whether you rent the Center. Therefore these costs are not marginal costs of renting the center to you.

b) The university's marginal benefit is the amount of rent that you pay.

c) You should start negotiating from $171. Because the university's marginal cost is $170 and the amount [you] pay is its marginal benefit, the university will be better off if it accepts any amount greater than $170. If the manager is still not convinced, tell the manager that, since no one else wants to rent the Center on that day, declining your offer is not cost free. The opportunity cost of not accepting it will be the difference between the offered rent and $170. In practice, of course, there are transaction costs, such as the time spent by both parties to negotiate and sign the agreement, and accepting your offer will cost the manager some extra time and organizational effort. Also, as you learnt in this chapter, people are guided by self interest when they make their decisions and the manager's self interest is not necessarily the same as the university's interest. On the other hand, you might want to support your university. Therefore the amount of rent you will agree upon is likely to be higher than $171.

331) The horizontal axis in a graph
    A) measures time on a scatter diagram.   B) is named the y-axis.
    C) is named the x-axis.   D) measures the quality of a variable.

331) _____

    Answer: C

332) The vertical axis in a graph
    A) has no origin.
    B) measures time in a cross-section/time series graph.
    C) is named the x-axis.
    D) is named the y-axis.

332) _____

    Answer: D

333) The value of the y-coordinate of a point in a graph is the length of a line from the point to the
    A) x-axis.   B) scalar.   C) y-axis.   D) origin.

333) _____

    Answer: A

334) The value of the x-coordinate of a point in a graph is the length of a line from the point to the
    A) y-axis.   B) scalar.   C) origin.   D) x-axis.

334) _____

    Answer: A

335) On the horizontal axis of a graph, generally
    A) values can be positive and/or negative.   B) values increase from right to left.
    C) values increase from left to right.   D) Both answers A and C are correct.

335) _____
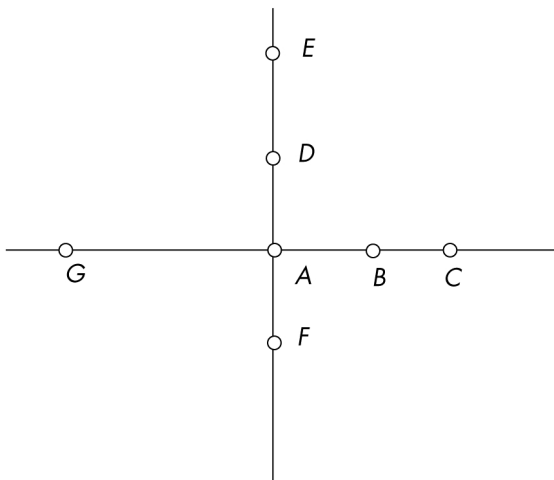
    Answer: D

336) In the figure above, the value on the x-axis increases as we move from
    A) point G to point A.   B) point F to point A.
    C) point C to point A.   D) point E to point A.

336) _____

    Answer: A

337) In the figure above, the value on the y-axis decreases as we move from   337) _____
    A) point E to point A.   B) point C to point A.
    C) point G to point A.   D) point F to point A.

Answer: A

338) In the figure above, point B is _____.   338) _____
    A) a coordinate   B) on the x-axis   C) on the y-axis   D) at the origin

Answer: B
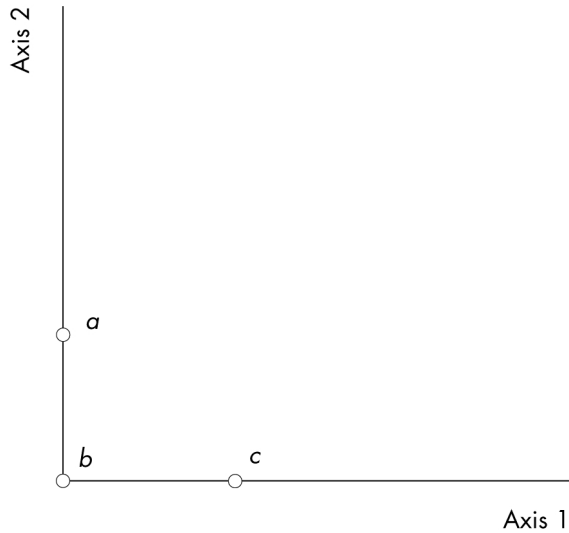
339) Using the above figure, the origin is at which point?   339) _____
    A) Point a
    B) Point b
    C) Point c
    D) None of the points in the figure is the origin.

Answer: B

340) Using the above figure, which of the following is true?   340) _____
    A) Point b is known as the origin.   B) Axis 1 is typically called the y-axis.
    C) Axis 2 is typically called the x-axis.   D) Axis 1 is also known as the origin.

Answer: A

341) To see how variables evolve over time we use   341) _____
    A) a scatter graph.   B) a cross-section plot.
    C) a time-series graph.   D) an evolution plot.

Answer: C

342) To show how a variable _____, we typically use a _____.

    A) relates to another variable; pie chart
    B) evolves over time; cross-section graph
    C) evolves over time; time-series graph
    D) relates to another variable; time-series graph

Answer: C

342) _____

343) A graph that measures time on the horizontal axis and one or more variables on the vertical axis is called a(n)

    A) time-series graph.   B) cross-section graph.
    C) one-dimensional graph.   D) inverted graph.

Answer: A

343) _____

344) Which type of graph is used to identify trends?

    A) time-series   B) cross-section
    C) scatter   D) None of the above answers is correct.

Answer: A

344) _____

345) Which of the following is correct about a time-series graph?

I.   The x-axis measures time.
II. A time-series graph can reveal if there is a trend in the variable.

    A) only I   B) only II   C) both I and II   D) neither I nor II

Answer: C

345) _____

346) From a time-series graph showing sales of shoes in dollars on the vertical axis, it is not possible to tell

    A) the changes in sales over time.
    B) the level of sales at a given time.
    C) the speed of change in sales over time.
    D) None of the above answers is correct because it is possible to tell *all* of the above from the time-series graph described.

Answer: D

346) _____

347) Time-series graphs can quickly convey information about

    A) the direction of change in the value of a variable over time.
    B) the level of a variable at any point in time.
    C) whether there is a trend in the variable over time.
    D) All of the above answers are correct.

Answer: D

347) _____

348) A time-series graph reveals whether there is a _____ which represents _____.

    A) trend in a variable; a general tendency for the variable to rise or fall
    B) trend in a variable; unrelated variables
    C) relationship between two variables; a cross-section graph
    D) relationship between two variables; a trend in a variable

Answer: A

348) _____

349) A time-series graph showing total production in Japan from 1960 to 2002 shows a positive trend. It   349) _____
is the case that total production
A) was higher in 2002 than in 1960.   B) was lower in 2002 than in 1960.
C) fell every year between 1960 and 2002.   D) rose every year between 1960 and 2002.

Answer: A

350) A time-series graph showing the unemployment rate between 1980 and 2002 shows a negative   350) _____
trend. It is likely that the unemployment rate
A) fell every year between 1980 and 2002.   B) was lower in 2002 than in 1980.
C) rose every year between 1980 and 2002.   D) was higher in 2002 than in 1980.

Answer: B

351) You think that the volume of textiles produced in the United States has generally decreased. This   351) _____
belief means that in a time-series graph illustrating the total amount produced, you expect to find
A) a positive trend.
B) no relationship between time and the amount produced.
C) a linear relationship.
D) an inverse relationship between time and the amount produced.

Answer: D

352) Demonstrating how an economic variable differs across countries for a specific year is best   352) _____
illustrated by
A) a scatter diagram.
B) a cross-section graph.
C) a time-series graph.
D) None of the above because any type of graph might mislead.

Answer: B
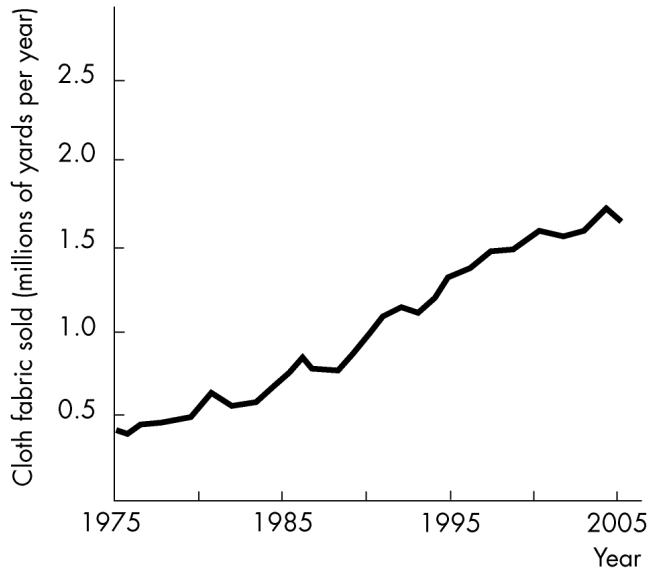
353) In the above figure, the amount of cloth fabric sold over time exhibits   353) _____
    A) an upward trend.
    B) a downward trend.
    C) no trend.
    D) None of the above because the figure cannot show the trend of the amount of cloth fabric sold.

    Answer: A

354) On a time-series graph, time is typically shown   354) _____
    A) as an area.   B) along the y-axis.
    C) as an implicit variable held constant.   D) along the x-axis.

    Answer: D

355) The horizontal axis on a time-series graph   355) _____
    A) runs parallel to the y-axis.
    B) measures units of time such as years.
    C) measures how the variable being graphed changes.
    D) measures the variable being graphed.

    Answer: B

Vertical axis / Horizontal axis
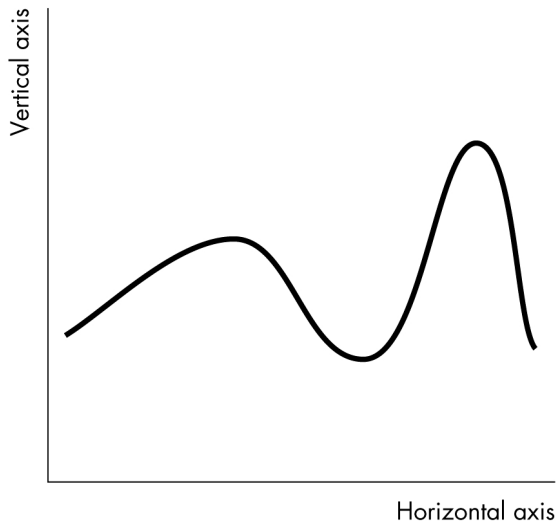
356) The figure above shows a time-series graph. The horizontal axis measures _____ and the   356) _____
vertical axis measures _____.
   A) y-values; the variable of interest   B) time; x-values
   C) time; the variable of interest   D) the variable of interest; time

Answer: C

Rainfall (inches) / Time
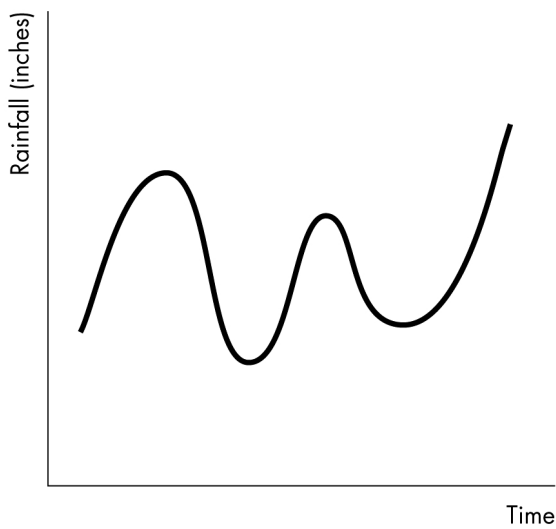
357) The figure above shows a   357) _____
   A) scatter diagram.   B) regression.
   C) time-series graph.   D) two-variable time-series graph.
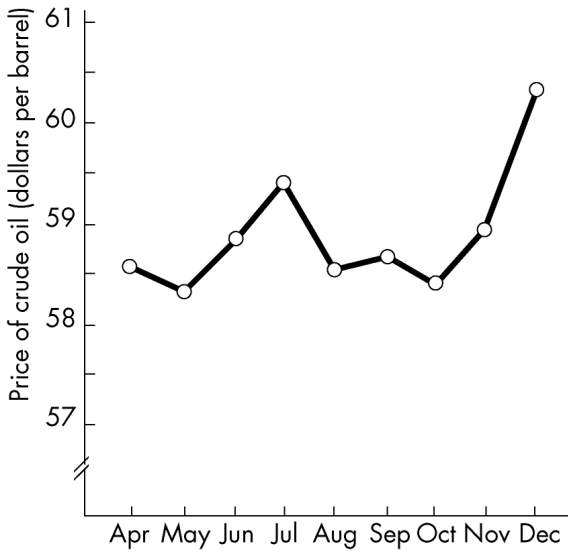
Answer: C

358) Using the above figure, during which month was the price for crude oil the highest?   358) _____
    A) October   B) July   C) December   D) May

Answer: C

359) Using the above figure, during which of the following periods does the price of crude oil have a   359) _____
downward trend?
    A) May to July   B) October to December
    C) May to November   D) July to October

Answer: D

360) Using the above figure, during which of the following periods does the price of crude oil shows an   360) _____
upward trend?
    A) April to November   B) May to November
    C) July to October   D) May to July and October to December

Answer: D
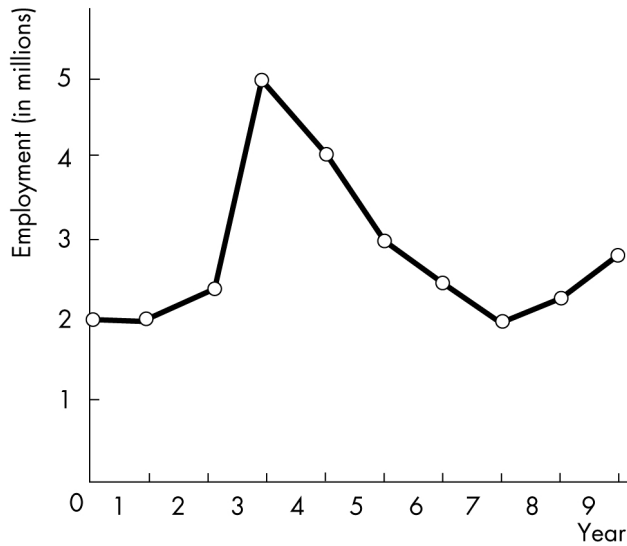
361) According to the graph in the figure above, which year experienced the most rapid change in employment?

361) _____

   A) Year 2   B) Year 4   C) Year 5   D) Year 3

   Answer: D
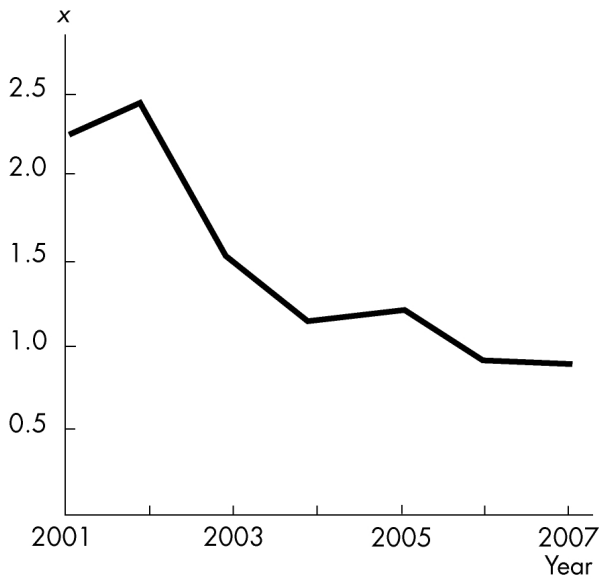
362) In the above figure, the diagram shows

362) _____

   A) a downward trend in x.   B) an upward trend in x.
   C) a two-variable scatter diagram.   D) a scatter diagram.

   Answer: A

363) A time-series graph displaying real GDP from 1950 to 2008 has a positive trend. It is likely that real   363) _____
GDP
    A) rose every year from 1950 to 2008.   B) was lower in 1950 than in 2008.
    C) was higher in 1950 than in 2008.   D) fell every year from 1950 to 2008.

Answer: B

364) Inflation climbed steadily from 1952 to 1972. A time-series graph with inflation on the vertical axis   364) _____
and time (in years) on the horizontal axis would show
    A) the rate of inflation as a horizontal line.
    B) that inflation had a positive trend.
    C) that inflation had a negative trend.
    D) that inflation was following a decreasing trend line.

Answer: B

365) A time-series graph displays the price of copper. The slope of the line is negative for periods when   365) _____
the
    A) price of copper is rising.   B) quantity of copper is falling.
    C) price of copper is low and not changing.   D) price of copper is falling.

Answer: D

366) A graph shows the wages of factory workers. The slope of the line is positive for periods when the   366) _____
wage rate is
    A) high but not rising any higher.   B) falling.
    C) rising.   D) low.

Answer: C

367) A trend is   367) _____
    A) the maximum value of a variable.
    B) a measure of closeness on a scatter diagram.
    C) the minimum value of a variable.
    D) a general tendency for a variable to rise or fall.

Answer: D

368) A trend shows   368) _____
    A) the scale used to measure to variables.
    B) the degree of correlation between two variables.
    C) the general tendency for a variable to rise or fall.
    D) the increases in one variable.

Answer: C

369) Trend refers to   369) _____
    A) decreases but not increases of a variable.
    B) the scale used on the *x*- and *y*-coordinates.
    C) a general tendency for a variable to rise or fall.
    D) increases but not decreases of a variable.

Answer: C

370) Which of the following is TRUE regarding a trend?   370) _____
   I.   A cross section graph shows trends.
   II. A time-series graph shows trends.
   III. A scatter plot shows trends over time.
      A) I only   B) II only   C) I and II   D) II and III
   Answer: B

371) A cross-section graph shows the value of a variable   371) _____
      A) as an absolute rate of change over time.   B) for different groups at a point in time.
      C) for a given group across time.   D) as a percentage rate of change over time.
   Answer: B

372) A _____ shows relative values for different groups at a certain point in time.   372) _____
      A) scatter plot   B) regression
      C) cross-section graph   D) time-series graph
   Answer: C
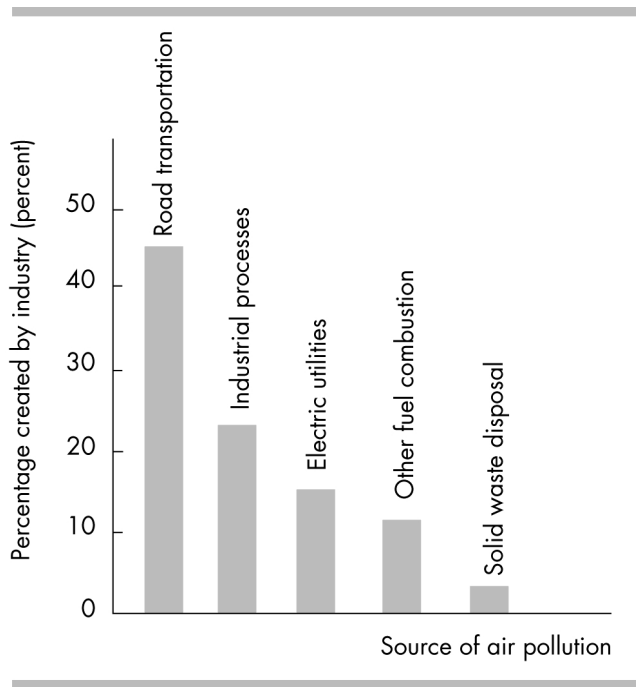
373) The above figure shows sources of air pollution. The figure is   373) _____
      A) a multi-variable line graph.   B) a scatter plot diagram.
      C) a cross-section graph.   D) a time-series graph.
   Answer: C

374) Which type of graph shows the values of an economic variable for different groups in a population   374) _____
   at a point in time?
      A) cross-section   B) scatter
      C) time-series   D) None of the above answers is correct.
   Answer: A

56

375) A graph shows the average wage of various demographic groups in 2007. The kind of graph used to show this data would be

    A) a time-series graph.   B) a cross-section graph.

    C) a Venn-diagram.   D) a scatter plot.

375) _____

Answer: B

376) A graph shows the average SAT scores for males and females in 2009. The kind of graph used to show this data would be

    A) a cross-section graph.   B) a scatter plot.

    C) a time-series graph.   D) none of the above

376) _____

Answer: A

377) Suppose that we plot, on a bar chart, levels of average consumption per person for different age classes at a point in time. This graph is an example of a

    A) cross-section graph.   B) three-dimensional graph.

    C) inverted graph.   D) time-series graph.

377) _____

Answer: A

378) A cross-section graph examines

    A) one variable at a point in time.   B) two time-series over time.

    C) one variable over time.   D) two variables over time.

378) _____

Answer: A

379) For cross-section graphs

    A) it is always best to use a time-series diagram.

    B) all information relates to the same time frame.

    C) it is always best to use a scatter diagram.

    D) Both answers B and C are correct.

379) _____

Answer: B

380) A graph that shows the average income of different cities for a given year is considered to be:

    A) a time-series graph.   B) a trend graph.

    C) the origin.   D) a cross-section graph.

380) _____

Answer: D

381) You have data for real income per person for developing countries in 2002. The type of graph to best display these data would be a

    A) scatter diagram.   B) time-series graph.

    C) multi-variable time-series graph.   D) cross-section graph.

381) _____

Answer: D

382) You have data for sales revenues for all the pizza stores you own for the month of September. The type of graph to best display these data would be a

    A) cross-section graph.   B) scatter diagram.

    C) Venn diagram.   D) time-series graph.

382) _____

Answer: A

383) You have data for the amount of rainfall in 50 cities for the month of June. The type of graph to best display these data would be a   383) _____
    A) scatter diagram.   B) cross-section graph.
    C) time-series graph.   D) multi-variable time-series graph.

Answer: B

384) You have data for average tax rates for each of the 50 states for 2002. The type of graph to best display these data would be a   384) _____
    A) time-series graph.   B) scatter diagram.
    C) multi-variable time-series graph.   D) cross-section graph.

Answer: D

385) An economist is studying how wages for high-school dropouts vary among six western European countries in 2007. These data could be graphed in   385) _____
    A) a one-variable graph.
    B) a time-series graph with each different country measured along the horizontal axis.
    C) two triple-axes graphs.
    D) a cross-section graph.

Answer: D

386) A school board is studying how test scores vary by socio-economic levels. The data represent information observed in 2007. The most effective way of depicting the data is a   386) _____
    A) trending-line graph.   B) cross-section graph.
    C) one-variable graph.   D) time-series graph.

Answer: B

387) A scatter diagram shows the   387) _____
    A) change in one variable over time.   B) evolution of a variable.
    C) level of one variable over time.   D) relationship between two variables.

Answer: D

388) A scatter diagram will be most useful   388) _____
    A) in discerning a possible relationship between height and weight for individuals.
    B) in predicting next year's rate of unemployment.
    C) in resolving a dispute over two normative assertions.
    D) All of the above are correct.

Answer: A

389) Which type of graph is most useful in determining if two variables are correlated?   389) _____
    A) cross-section   B) scatter
    C) time-series   D) None of the above answers is correct.

Answer: B

390) Which type of graph should be used if the purpose of the graph is to check the strength of the relationship between savings and income?   390) _____
    A) a scatter diagram   B) a time-series graph
    C) a trend diagram   D) a bar chart

Answer: A

391) You notice that when interest rates increases, new residential housing prices tend to decrease. This observation indicates that   391) _____
    A) there must be false causality between interest rates and housing prices.
    B) a scatter diagram between interest rates and housing prices will show a negative relationship.
    C) a cross-section graph between interest rates and housing prices will show a negative relationship.
    D) higher interest rates must cause low housing prices.

Answer: B

392) Recording data about students' class year and GPA in a graph will yield   392) _____
    A) no relationship, under any circumstances.   B) a scatter diagram.
    C) a contour map.   D) a time-series diagram.

Answer: B
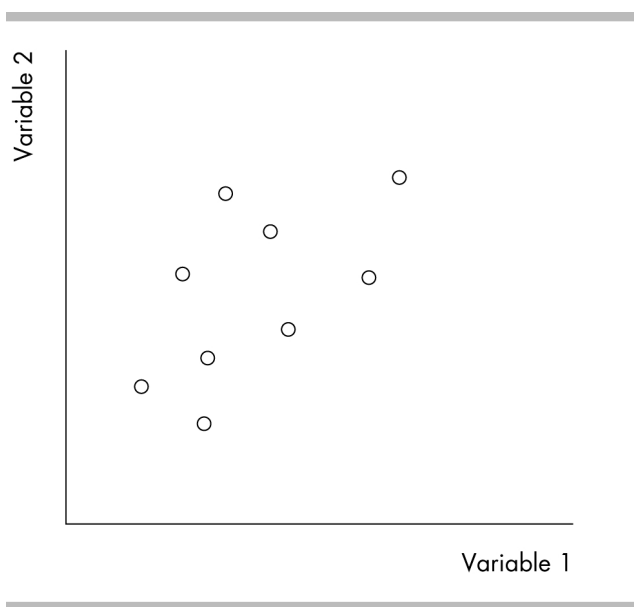
393) The figure above is a   393) _____
    A) cross-section graph.
    B) time-series graph.
    C) scatter diagram.
    D) not a scatter diagram, nor a time series graph, nor a cross-section graph.

Answer: C

Variable 2 (vertical axis) vs Variable 1 (horizontal axis)
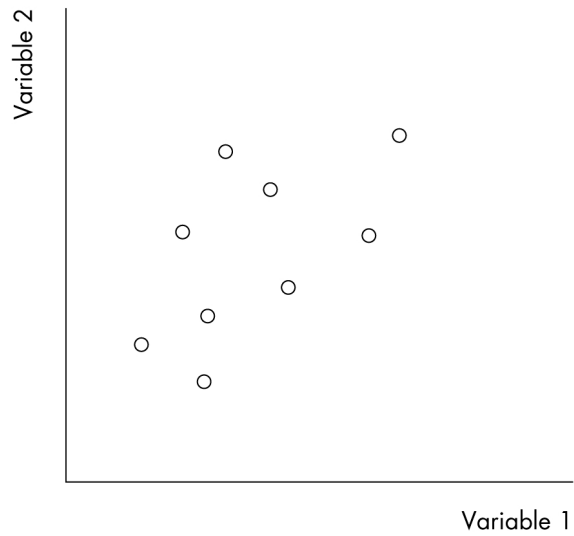
394) The above figure is

    A) a scatter diagram showing that there is no clear relationship between unemployment and inflation.
    B) an economic model showing that when unemployment falls, inflation rises.
    C) a time-series graph showing that when unemployment rises, so too does inflation.
    D) a cross-section graph showing that when unemployment falls, so too does inflation.

    Answer: A
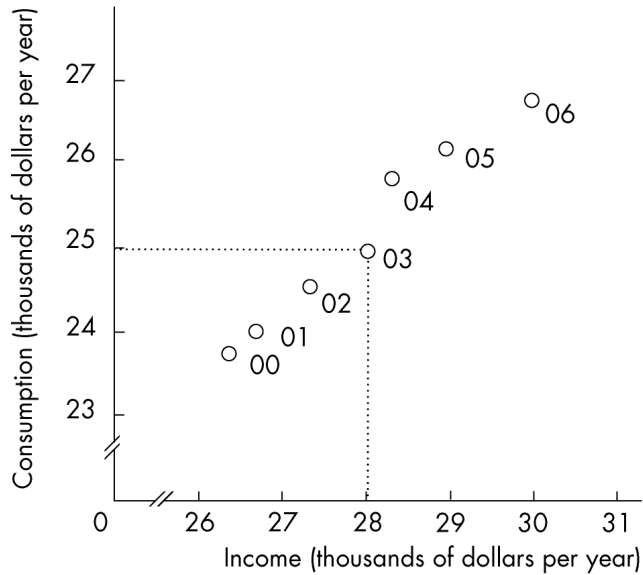
395) The above figure plots income and consumption in a nation. In 2003   395) _____
   A) consumption was equal to $27,000 and income was equal to $31,000.
   B) consumption was equal to $25,000 and income was equal to $28,000.
   C) consumption was equal to $25,000 and income was equal to $25,000.
   D) consumption was equal to $28,000 and income was equal to $25,000.
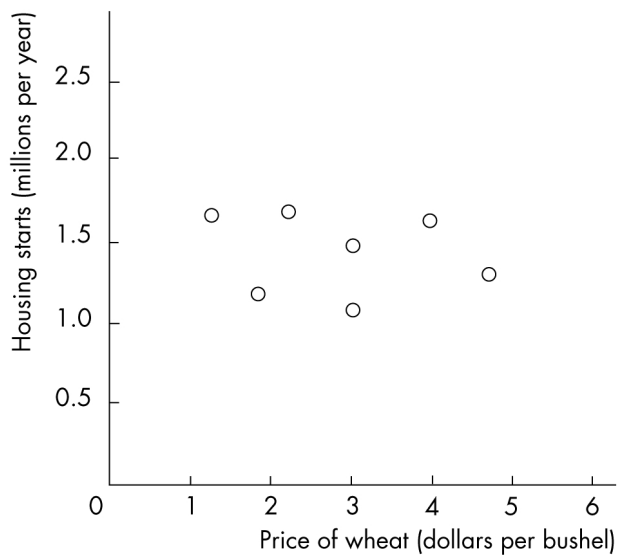
   Answer: B

396) The above figure graphs the price of a bushel of wheat and housing starts. The graph shows the   396) _____
   variables are
   A) related via an indirect relationship.   B) strongly negatively related.
   C) not related.   D) strongly positively related.
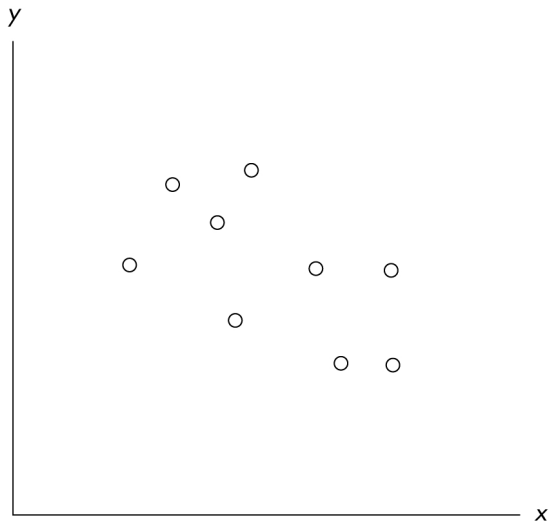
   Answer: C

397) The figure above is an example of a   397) _____
    A) scatter diagram.   B) cross-section graph.
    C) time-series graph.   D) regression.

Answer: A

398) Compared to other types of graphs, a _____ is preferred to show the relationship between two   398) _____
variables like unemployment and inflation.
    A) time-series graph   B) coordinate
    C) scatter diagram   D) cross-section graph

Answer: C

399) Using a graph to plot family incomes against food expenditures results in   399) _____
    A) a time-series and a scatter diagram.
    B) a scatter diagram.
    C) a time-series graph.
    D) neither a time-series nor a scatter diagram.

Answer: B
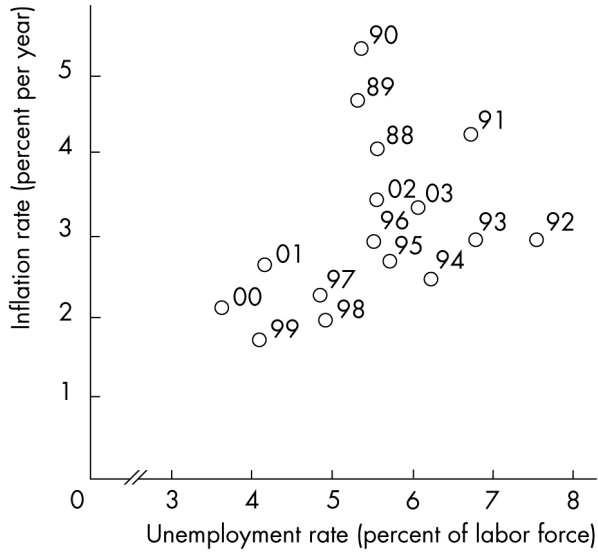
400) The figure above shows that in 1996, unemployment was equal to about _____ and the inflation   400) _____
rate was equal to about _____.
    A) 6.0 percent; 4.0 percent   B) 5.5 percent; 3.0 percent
    C) 7.0 percent; 3.0 percent   D) 3.0 percent; 5.5 percent

Answer: B
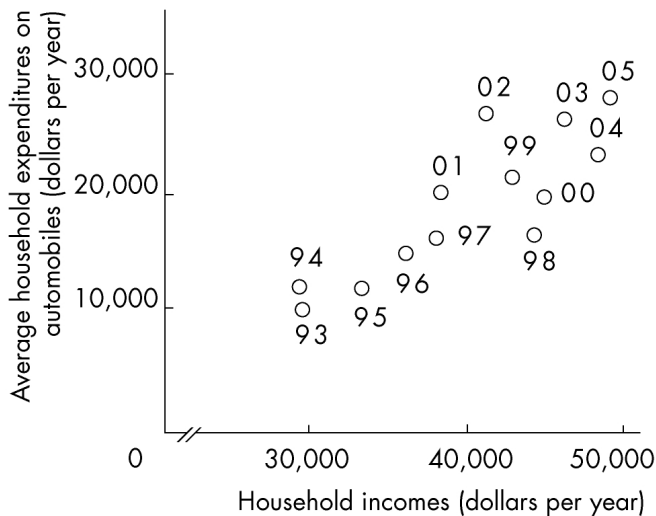
401) The above figure is a   401) _____
    A) time-series graph.   B) cross-section graph.
    C) scatter diagram.   D) None of the above answers is correct.

Answer: C

402) The above figure reveals 402) _____
    A) that as household income increases the average household expenditure on automobiles decreases.
    B) that as household income increases the average household expenditure on automobiles increases.
    C) no relationship between household income and average household expenditure on automobiles.
    D) All of the above are possible.

Answer: B
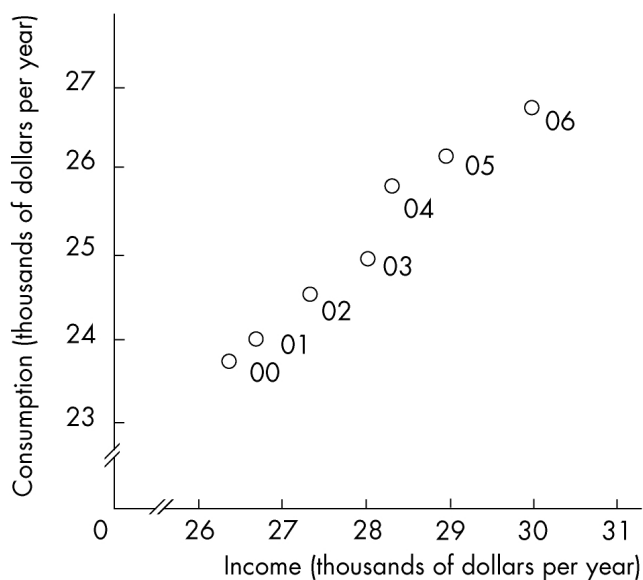
403) In the above figure, the axis breaks are used 403) _____
    A) to create a misleading graph.
    B) to show that there are no data available for the omitted ranges.
    C) to indicate that there are jumps from the origin, 0, to the first values recorded along the axes.
    D) to indicate that there are not enough data to be included in the graph.

Answer: C
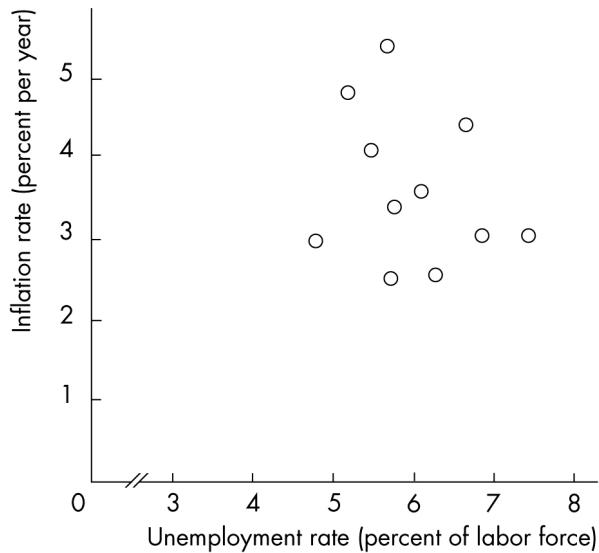
404) In the above figure, the axis break in the *x*-axis

404) _____

    A) shows that there is no relationship between inflation and unemployment.

    B) misleadingly shows that inflation has changed very little even though the unemployment rate has increased a great deal.

    C) implies that for the years covered in the figure, the inflation rate was always greater than 1 percent.

    D) reflects the fact that for the years covered in the figure, the unemployment rate was never less than 3 percent.

    Answer: D

405) On a graph, high correlation between the variable measured along the *x*-axis and the variable measured along the *y*-axis

405) _____

    A) does <u>NOT</u> mean that a change in the variable measured along the *x*-axis must cause a change in the variable measured along the *y*-axis.

    B) means that changes in the variable measured along the *y*-axis must cause changes in the variable measured along the *x*-axis.

    C) means that changes in either variable must cause changes in the other variable.

    D) means that changes in the variable measured along the *x*-axis must cause changes in the variable measured along the *y*-axis.
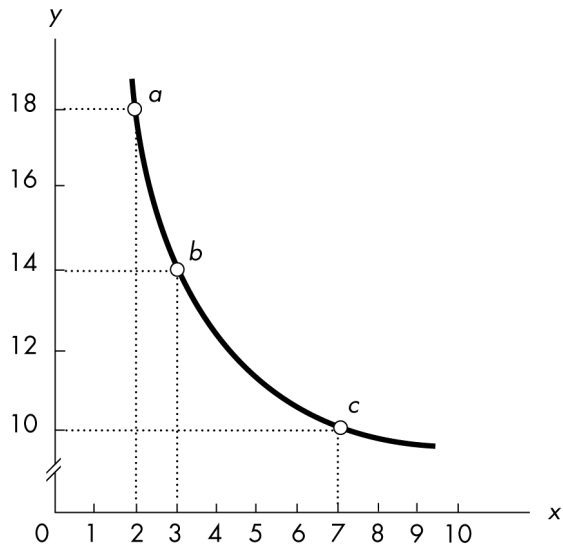
    Answer: A

406) In the above figure, the x-coordinate of point b is

  A) 3.   B) 14.   C) 2.   D) 1.

  Answer: A

407) In the above figure, the y-coordinate of point b is

  A) 3.   B) 2.   C) 14.   D) 1.

  Answer: C
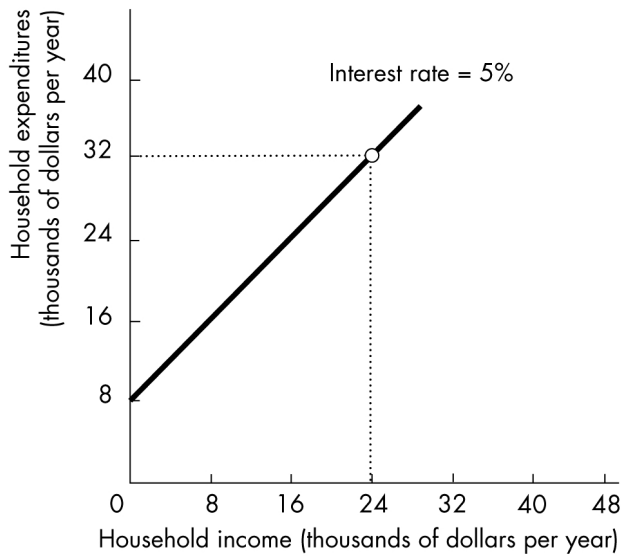
408) In the above figure, when income is zero, household expenditures equal

  A) $1000.   B) 0.   C) $8000.   D) $4000.

  Answer: C

406) _____

407) _____

408) _____

409) Demonstrating how an economic variable changes from one year to the next is best illustrated by a   409) _____
    A) one-variable graph.   B) cross-section graph.
    C) time-series graph.   D) linear graph.

Answer: C

410) You believe that the total amount of goods produced in the United States has generally increased   410) _____
over the years. In a time-series graph illustrating the total amount produced, you expect to find
    A) no relationship between time and the amount of goods produced.
    B) an inverse relationship between time and the amount of goods produced.
    C) a linear relationship.
    D) an upward trend.

Answer: D

411) You notice that when the inflation rate increases, the interest rate tends to increase. This   411) _____
observation indicates that
    A) a cross-section graph of the inflation rate and the interest rate will show a positive
       relationship.
    B) higher inflation rates must cause a higher interest rate.
    C) a scatter diagram of the inflation rate and the interest rate will show a positive relationship.
    D) there might be false causality between inflation and the interest rate.

Answer: C

412) You hypothesize that more natural gas is sold in the Northeast when winters are colder. Which of   412) _____
the following possibilities would best reveal if your belief is correct?
    A) A scatter-diagram plotting the average temperature in the Northeast against the amount of
       natural gas sold.
    B) A trend diagram that plots the trend in natural gas sales over the last 30 years against the
       average temperature in the Northeast 30 years ago and this year.
    C) A time-series diagram showing the amount of natural gas sold in the Northeast during the
       last 30 years.
    D) A time-series diagram showing the average temperature in the Northeast during the last 30
       years.

Answer: A

413) Which type of graph can mislead?   413) _____
    A) a scatter diagram   B) a cross-section graph
    C) a time-series graph   D) *Any* type of graph might mislead.

Answer: D
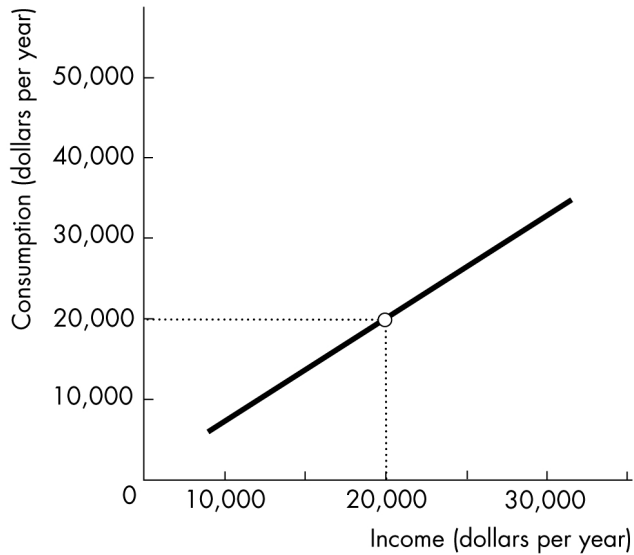
414) In the figure above, when income equals $20,000, what does consumption equal?
    A) $0   B) $20,000
    C) $10,000   D) impossible to tell
414) _____
Answer: D

415) If two variables are positively related, then
    A) they move in opposite directions.   B) they move in the same direction.
    C) they are independent of each other.   D) their graph will have a negative slope.
415) _____
Answer: B

416) If two variables both increase at the same time or decrease at the same time, they are
    A) conversely related.   B) negatively related.
    C) unrelated to each other.   D) positively related.
416) _____
Answer: D

417) If there is a direct relationship between two variables,
    A) the slope of the line (or the slope of a tangent line to the curve) will be negative.
    B) the graph of the relationship will be downward-sloping.
    C) the graph of the relationship will be upward-sloping.
    D) Both answers A and C are correct.
417) _____
Answer: C

418) The variable measured on the y-axis increases whenever the variable measured on the x-axis increases. As a result, the relationship between the variables will
    A) have a slope of zero.   B) be negatively sloped.
    C) be a vertical line.   D) be none of the above.
418) _____
Answer: D

419) A positive relationship exists between two variables if

    A) a reduction in one variable is associated with a decrease in the other variable.

    B) a reduction in one variable is associated with an increase in the other variable.

    C) one variable has "positively" no effect on the other variable.

    D) both variables are inflation-distorted.

Answer: A

420) If the slope of a line that graphs the relationship between variable x and variable y is positive, then we know that

    A) the two variables have an inverse relationship.

    B) the two variables are unrelated.

    C) when the value of variable x increases, then the value of variable y decreases.

    D) when the value of variable x decreases, then the value of variable y decreases.

Answer: D

421) For the Jones household it has been estimated that for every ten degrees increase in the outdoor temperature the consumption of ice tea increases by 5 glasses. What type of relationship exists between temperature change and the consumption of ice tea?

    A) maximum relationship   B) no relationship

    C) negative relationship   D) positive relationship
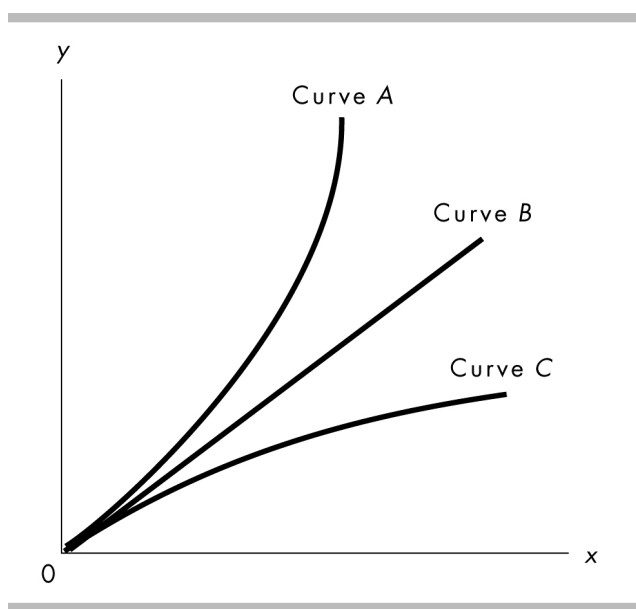
Answer: D

422) In the above figure, which curve shows a positive relationship between x and y?

    A) Only curve A.

    B) Only curve B.

    C) Only curve C.

    D) All the curves show a positive relationship.

Answer: D

423) In the above figure, which curve shows a negative relationship between *x* and *y*? 423) _____
    A) Only curve *A.*
    B) Only curve *B.*
    C) Only curve *C.*
    D) None of the curves show a negative relationship.

Answer: D

424) A scatter diagram with the price of vacations to Mexico on the vertical axis and the price of 424) _____
vacations to California on the horizontal axis shows a positive relationship. If the price of vacations
to Mexico were placed on the horizontal axis, and the price of vacations to California on the vertical
axis, the relationship would be
    A) positive relationship, also called a direct relationship.
    B) negative relationship, also called a direct relationship.
    C) negative relationship, also called an inverse relationship.
    D) positive relationship, also called an inverse relationship.

Answer: A

425) If you hire 1 worker, he can produce 10 pretzels a day. If you hire a 2nd worker, she can produce 8 425) _____
more pretzels. If you hire a 3rd worker, she can produce 6 more pretzels a day. A graph displaying
this relationship between the number of employees on the horizontal axis and total pretzel output
per day on the vertical axis shows
    A) an upward-sloping curve that becomes less steep as employment increases.
    B) a positive linear relationship.
    C) a negative linear relationship.
    D) a negatively-sloped curve that becomes less steep as employment as increases.

Answer: A
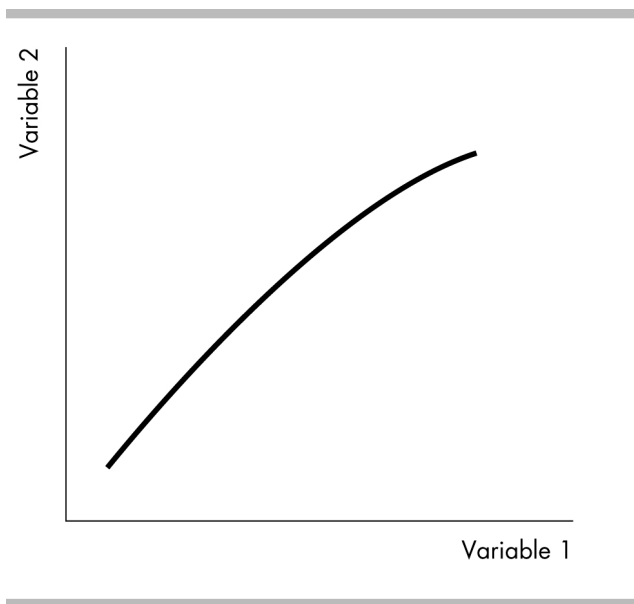
426) The figure above shows _____ relationship between the two variables. 426) _____
    A) a negative   B) no   C) a positive   D) an inverse

Answer: C

427) "As you devote more hours to studying, your GPA increases." A graph of this relationship would show

    A) a direct relationship.   B) a positive relationship.

    C) an inverse relationship.   D) Both answers A and B are correct.

427) _____

Answer: D

428) "As interest rates rise, people save more money." A graph displaying this relationship would show

    A) an inverse relationship.   B) a cross-section graph.

    C) a positive then a negative relationship.   D) a positive relationship.

428) _____

Answer: D

429) "If you hire 1 worker, the worker can produce 20 pizzas a day. If you hire a 2nd worker, that worker can produce 10 more pizzas. If you hire a 3rd worker, that worker can produce 2 more pizzas a day." A graph displaying this relationship between the number of employees and *total* pizza output per day would show

    A) a negatively-sloped curve that becomes less steep.

    B) a positive linear relationship.

    C) a negative linear relationship.

    D) an upward-sloping curve that becomes less steep.

429) _____

Answer: D

430) If you study 3 hours for an exam, you can raise your score by 30 points. If you study for another 3 hours your score increases by 10 points. And if you study for another 3 hours, your score will increase by 5 more points. A graph displaying this relationship between the number of hours studied and your *total* exam score would show

    A) an upward-sloping curve that becomes more steep.

    B) a positive linear relationship.

    C) a negative linear relationship.

    D) an upward-sloping curve that becomes less steep.

430) _____

Answer: D

431) Suppose you produce 10 bikes a day for a total cost of $1000. Total costs increase to $1100 when you produce 15 bikes. Finally, total costs increase to $1300 if you make 20 bikes. A graph showing the relationship between total costs and the number of bikes produced would be

    A) a negatively-sloped line that becomes steeper.

    B) a positively-sloped line that becomes flatter.

    C) a positively-sloped line that becomes steeper.

    D) a negatively-sloped line that becomes flatter.

431) _____

Answer: C

x	y
0	0
2	6
4	12
6	18
8	24
10	30

432) In the above table, when x increases from 4 units to 6 units, y changes by _____ units.   432) _____
    A) -6   B) -2   C) 6   D) 2

Answer: C

433) The above table indicates that variables x and y are   433) _____
    A) second cousins.   B) positively related.
    C) negatively related.   D) inversely related.

Answer: B

x	y
0	2
1	5
2	8
3	11
4	14
5	17

434) Given the information in the above table, the relationship between x and y is   434) _____
    A) positive and linear.
    B) negative and linear.
    C) positive, and the curve becomes flatter as x increases.
    D) positive, and the curve becomes steeper as x increases.
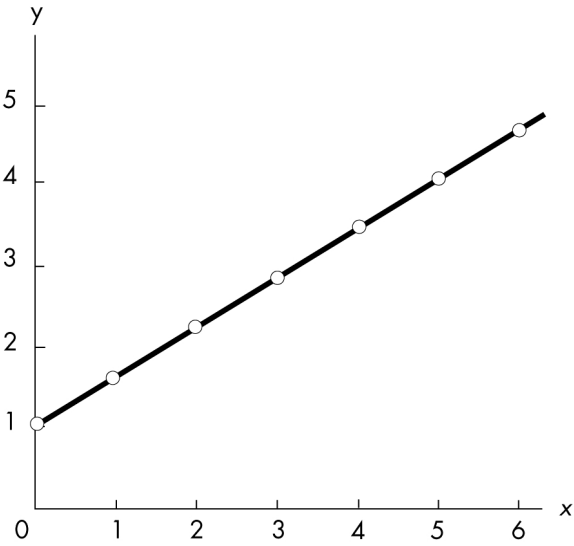
Answer: A

435) In the above figure, the relationship between *x* and *y* is
    A) negative and linear.
    B) positive, and the curve becomes flatter as *x* increases.
    C) positive, and the curve becomes steeper as *x* increases.
    D) positive and linear.

435) _____

Answer: D

Total household income (dollars)	Total consumption (dollars)
30,000	27,000
40,000	35,000
50,000	38,000

436) The data in the table above shows the relationship between the Joneses' total consumption and total household income. Based on these data, total consumption varies
    A) negatively with their income.
    B) inversely with their total household income.
    C) independently of their total household income.
    D) directly with their total household income.

436) _____

Answer: D
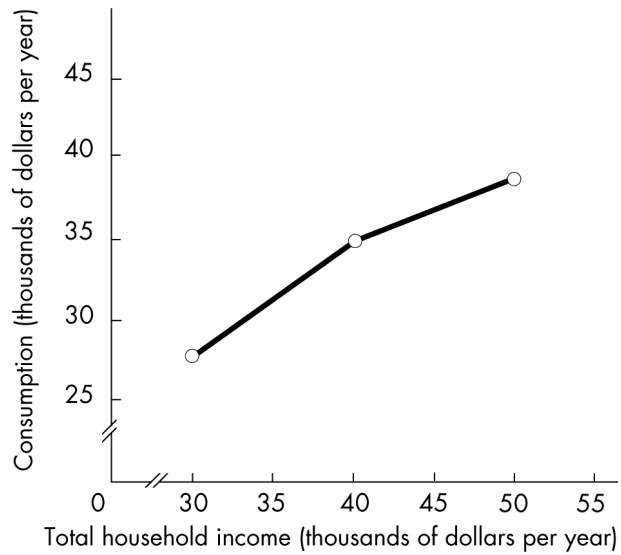
437) The above figure shows the relationship between the Joneses' total consumption and total household income. The figure illustrates that the Joneses' total consumption varies

437) _____

    A) negatively with their income.

    B) independently of their total household income.

    C) inversely with their total household income.

    D) directly with their total household income.

Answer: D
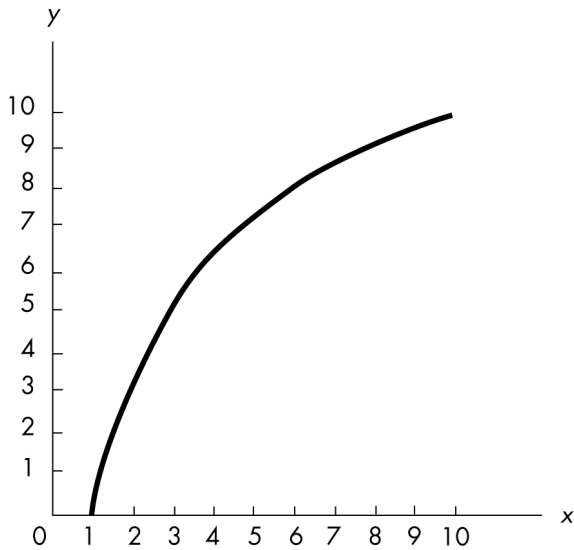
438) The relationship depicted in the above figure is
    A) a negative linear relationship.
    B) a positive becoming less steep relationship.
    C) a positive linear relationship.
    D) a positive becoming steeper relationship.

    Answer: B

438) _____

439) Whenever one variable increases, another variable decreases. The two variables are
    A) negatively related.
    B) unrelated to each other.
    C) definitely related through a third variable.
    D) positively related.

    Answer: A

439) _____

440) If variable x always increases when variable y decreases, x and y are said to be
    A) trend related.   B) negatively related.
    C) positively related.   D) unrelated.

    Answer: B

440) _____

441) If there is an inverse relationship between variable x and variable y, then an increase in the value of
    variable x will be accompanied by
    A) an increase in the value of variable y.   B) variable y reaching its maximum value.
    C) a decrease in the value of variable y.   D) no change in the value of variable y.

    Answer: C

441) _____

442) If there is an inverse relationship between two variables, the
    A) graph of this relationship will be downward-sloping.
    B) graph of this relationship will be upward-sloping.
    C) graph of this relationship will be a horizontal line.
    D) slope of the line (or the slope of a tangent line to the curve) will be positive.

    Answer: A

442) _____

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443) A negative relationship exists between the variable measured along the *y*-axis and the variable measured along the *x*-axis if

    A) the variable measured along the *x*-axis and the variable measured along the *y*-axis move in the opposite direction.

    B) the variable measured along the *x*-axis and the variable measured along the *y*-axis move in the same direction.

    C) an increase in the variable measured along the *x*-axis is associated with an increase in the variable measured along the *y*-axis.

    D) a reduction in the variable measured along the *x*-axis is associated with a reduction in the variable measured along the *y*-axis.

    Answer: A

443) _____

444) Along a curve, when one variable increases, the other variable decreases. The curve showing this relationship has

    A) a positive slope.   B) a zero slope.

    C) an increasing then a decreasing slope.   D) a negative slope.

    Answer: D

444) _____

445) "As interest rates fall, people spend more." A graph showing the relationship between interest rates and spending would have

    A) an inverse relationship.   B) a negative then a positive slope.

    C) a negative slope.   D) Both answers A and C are correct.

    Answer: D

445) _____

446) "As the price of gasoline increases, fewer people buy cars that are gas guzzlers." A graph showing this relationship would have

    A) a direct relationship.   B) a horizontal line.

    C) a positive relationship.   D) a negative slope.

    Answer: D

446) _____

447) A graph shows that as fees to use ATM machines increase, people use them less frequently. The graph of this relationship would show

    A) an inverse relationship.   B) a negative relationship.

    C) a direct relationship.   D) Both answers A and B are correct.

    Answer: D

447) _____

448) "The price of long distance phone calls goes down after 5 p.m. and falls further after 11 p.m. As a result, people make more long distance phone calls as it gets later each night." A graph showing this relationship between long distance phone rates and the number of calls made would show

    A) a negatively-sloped curve.   B) an inverse relationship.

    C) a positively-sloped curve.   D) Both answers A and B are correct.

    Answer: D

448) _____

449) As the number of days without rain increases, the amount of wheat per acre grown declines. A graph showing this relationship shows

    A) a positive relationship.   B) a horizontal line.

    C) a vertical line.   D) none of the above

    Answer: D

449) _____

450) As a firm produces more and more CDs, the average cost of producing each CD falls. A curve showing the behavior of the average cost of a CD as more CDs are produced
    A) would be positively sloped.
    B) would be horizontal.
    C) would be positively and then negatively-sloped.
    D) would be negatively sloped.

450) _____

Answer: D

451) Suppose that we find that student grades and time spent at parties move in opposite directions. A graph of the relationship between these two variables would curve
    A) upward and may be linear or nonlinear.
    B) downward and be linear.
    C) upward and be linear.
    D) downward and may be linear or nonlinear.

451) _____

Answer: D

452) The faster an automobile is driven (speed), the lower the miles per gallon (mpg) for that automobile. Given this information, we say that an automobile's speed and mpg have
    A) an inverse relationship.   B) a maximum relationship.
    C) a direct relationship.   D) a linear relationship.

452) _____

Answer: A

453) As you devote more hours to studying, your snowboarding skills decrease. A graph of this relationship would show
    A) a negative relationship.   B) a direct relationship.
    C) an inverse relationship.   D) Both answers A and C are correct.

453) _____

Answer: D

454) If the quantity of wood purchased decreases when the price of wood rises, a graph representing these variables would have
    A) a positive slope.   B) time on the vertical axis.
    C) the slope on the vertical axis.   D) a negative slope.

454) _____

Answer: D

455) A scatter diagram with the price of peanut butter on the vertical axis and the price of jelly on the horizontal axis shows a negative relationship. If the price of jelly was placed on the vertical axis and the price of peanut butter was placed on the horizontal axis, the relationship would be a
    A) negative relationship, also called a direct relationship.
    B) positive relationship, also called a direct relationship.
    C) positive relationship, also called an inverse relationship.
    D) negative relationship, also called an inverse relationship.

455) _____
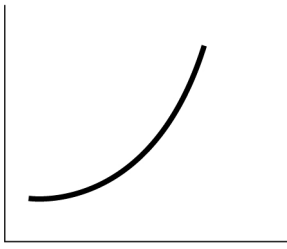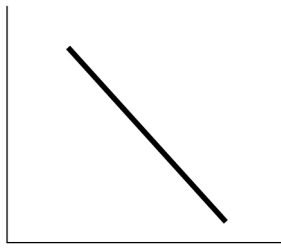
Answer: D

Figure A   Figure B
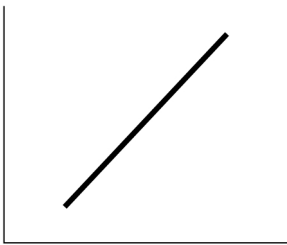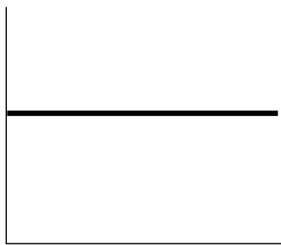
Figure C   Figure D

456) In the above figure, a negative relationship is demonstrated in which of the graphs?   456) _____
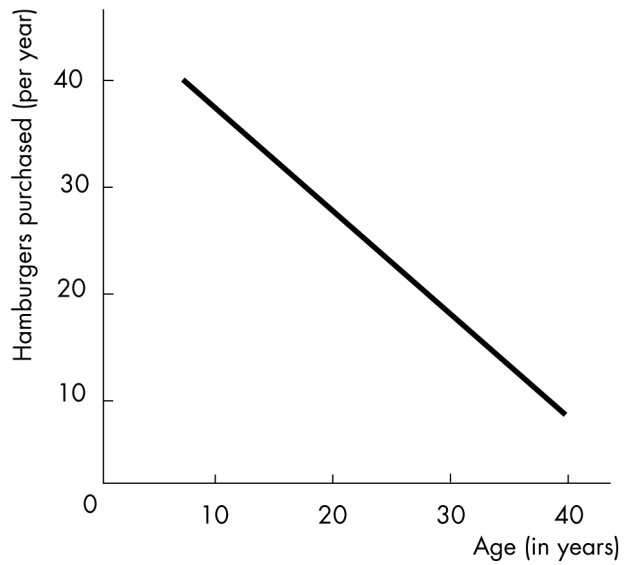   A) Figure A   B) Figure B   C) Figure C   D) Figure D
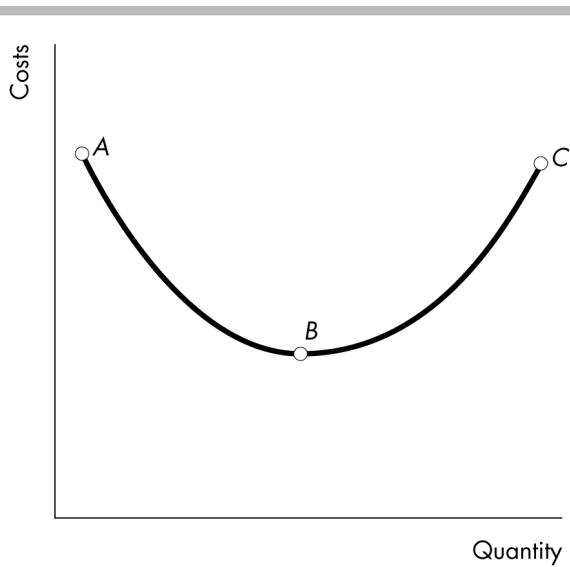
   Answer: B

457) The above figure depicts a   457) _____
   A) positive non-linear relationship between age and the number of hamburgers purchased per
      year.
   B) positive linear relationship between age and the number of hamburgers purchased per year.
   C) negative linear relationship between age and the number of hamburgers purchased per year.
   D) negative non-linear relationship between age and the number of hamburgers purchased per
      year.

   Answer: C

Costs

A

C

B

Quantity

458) In the above figure, the relationship between costs and quantity is negative
    A) between point *A* and point *B*.
    B) at nowhere along the curve.
    C) between point *B* and point *C*.
    D) along the entire curve.

458) _____

    Answer: A

Price

Quantity
Figure A

Price
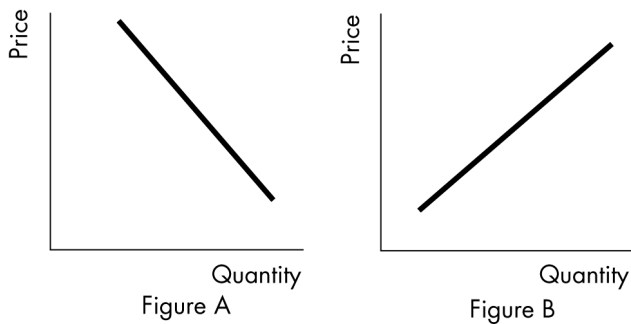
Quantity
Figure B

459) In the above, a positive relationship between price and quantity is shown in
    A) Figure A
    B) Figure B
    C) both Figure A and Figure B.
    D) neither Figure A nor Figure B.

459) _____

    Answer: B

460) In the above figure, a negative relationship between price and quantity is shown in
    A) Figure A.
    B) Figure B.
    C) both Figure A and Figure B.
    D) neither Figure A nor Figure B.

460) _____

    Answer: A

461) If a graph shows a negative relationship between two variables which then becomes a positive
relationship, this curve would
    A) always be an upward-sloping line.
                 B) have a minimum point.
    C) always be a downward-sloping line.
                 D) have a maximum point.

461) _____

Answer: B

462) As a firm expands its output, cost per unit of output (average cost) decreases and then increases.
Average cost and output have
    A) a relationship with a maximum.
                 B) no relationship.
    C) a relationship with a minimum.
                 D) a linear positive relationship.

462) _____

Answer: C

Decade	Productivity growth (percent)
1900s	1.80
1910s	1.85
1920s	2.40
1930s	1.55
1940s	2.60
1950s	3.00
1960s	2.55
1970s	1.15
1980s	1.23
1990s	2.15

463) In the above table, two minimum points in the table are the decades of
    A) 1910s and 1970s.
                 B) 1950s and 1980s.
    C) 1930s and 1970s.
                 D) 1960s and 1970s.

463) _____

Answer: C
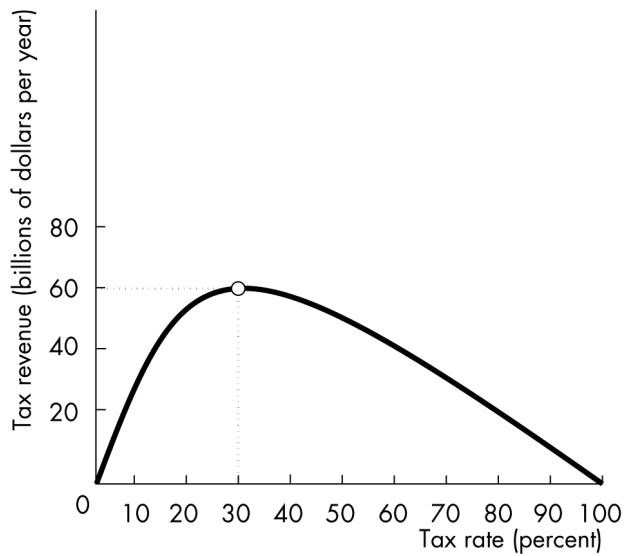
464) In the above figure, the relationship between the tax rate and tax revenue is positive and becoming less steep between tax rates of

464) _____

    A) 30 percent and 100 percent.   B) 0 percent and 30 percent.

    C) 0 percent and 100 percent.   D) None of the above answers are correct.

Answer: B

465) In the above figure, if the tax rate is increased from 20 percent to 30 percent, tax revenue

465) _____

    A) may increase or decrease.   B) is constant.

    C) increases.   D) decreases.

Answer: C

466) In the above figure, tax revenue is at a maximum when the tax rate is

466) _____

    A) 100 percent.   B) 0 percent.   C) 50 percent.   D) 30 percent.

Answer: D

467) As a curve approaches a maximum point, the slope will

467) _____

    A) increase before and after the maximum point.

    B) remain constant on either side of the maximum point.

    C) be negative, then positive after the maximum point.

    D) be positive, then negative after the maximum point.

Answer: D
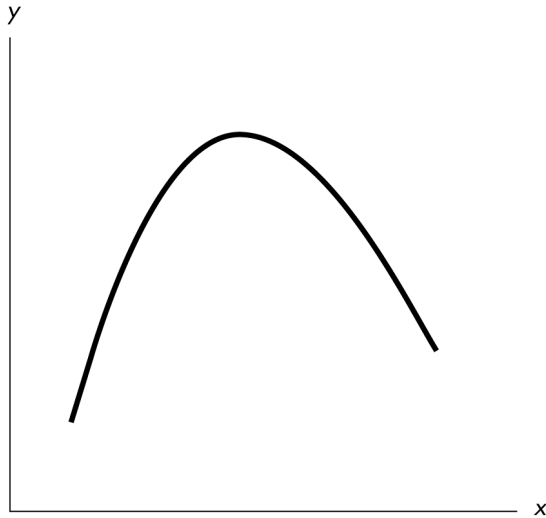
468) In the figure above, the relationship between the *x* variable and the *y* variable

468) _____

    A) starts by being positive and then becomes negative.

    B) is negative.

    C) starts by being negative and then becomes positive.

    D) is positive.

  Answer: A

Total number of workers	Total value of output(dollars)
15	10,000
16	12,000
17	9,000

469) Use the table above. Place the number of workers on the horizontal axis and the total value of output on the vertical axis. The graph displaying the data provided in the table would show

469) _____

    A) a positive relationship among all the data points.

    B) a negative relationship among all the data points.

    C) a horizontal line.

    D) none of the above

  Answer: D

Total number of workers	Average cost of producing a television set (dollars)
4	125
10	75
13	77
15	85

470) Graphing the data in the above table with the number of workers on the horizontal axis and the average cost on the vertical axis, the graph would show

    A) no relationship.

    B) first a negative and then a positive relationship.

    C) a horizontal line.

    D) a linear relationship.

470) _____

Answer: B

Year	Productivity growth rate (percent)
1990	-1.2
1991	1.9
1992	-3.3
1993	6.1
1994	7.9
1995	3.6
1996	3.4
1997	3.0
1998	4.1
1999	3.2
2000	0.7
2001	3.6

471) The table above gives productivity growth rate data for the nation of Alachua. The year when the growth rate was definitely at a minimum was

    A) 1990.   B) 2000.   C) 1996.   D) 1992.

471) _____

Answer: D

472) The table above gives productivity growth rate data for the nation of Alachua. The year when the growth rate was definitely at a maximum was

    A) 1994.   B) 1990.   C) 1997.   D) 2000.

472) _____

Answer: A

473) The table above gives productivity growth rate data for the nation of Alachua. Between 1994 and 1997, the trend in productivity growth was

    A) flat.   B) negative.   C) positive.   D) vertical.

473) _____

Answer: B

474) If a curve rises and then falls, it shows a

    A) maximum.
    B) constant slope relationship.
    C) linear relationship.
    D) minimum.

Answer: A

475) If a curve falls and then rises, it shows

    A) a constant slope relationship.
    B) a maximum.
    C) a minimum.
    D) a linear relationship.

Answer: C

476) Along a curved line, the slope at the maximum

    A) is zero.
    B) is less than zero.
    C) is greater than zero.
    D) may be greater than, less than, or equal to zero.

Answer: A

477) Monthly precipitation and monthly cable TV bills

    A) are positively related.
    B) are unrelated.
    C) are linearly related.
    D) Both answers A and B are correct.

Answer: B

478) When *y* changes, *x* stays the same. The line depicting this relationship would be

    A) horizontal.
    B) linear with a positive slope.
    C) linear with a negative slope.
    D) vertical.

Answer: D
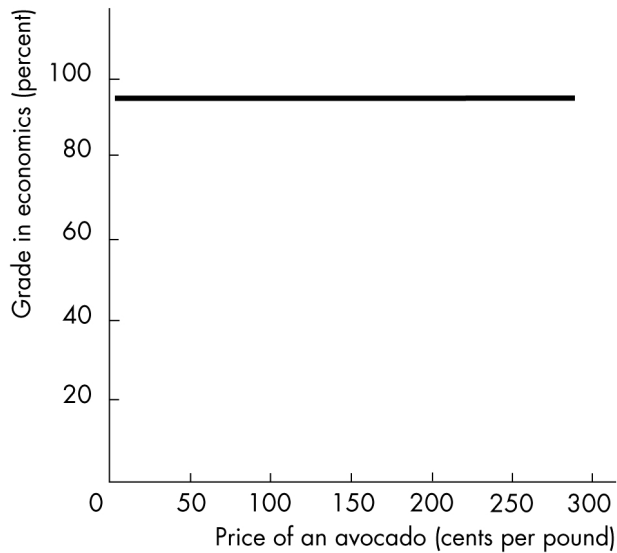
479) Which of the following correctly describes the above figure?   479) _____
    I.   There is no relationship between the price of an avocado and a student's grade in economics.
    II. The value of variable measured on the y-axis is constant as the variable measured on the x-axis
    increases.
    III. As a student's grade in economics increases, the price of an avocado increases.
    A) I, II, and III   B) II and III   C) I only   D) I and II

Answer: D

480) A diagram shows the quantity of tomatoes on the horizontal axis and the quantity of coffee on the   480) _____
   vertical axis. The quantity of tomatoes remains constant as the quantity of coffee increases. The
    graph of these data is
    A) a negatively sloped line   B) a positively sloped line.
    C) a horizontal line.   D) a vertical line.

Answer: D

481) A graph measures y on the vertical axis and x on the horizontal. The curve on the graph is a   481) _____
    horizontal line. From this fact we know that
    A) the ratio of x to y is constant.
    B) the slope of the line is not defined because y never changes.
    C) the value of x never changes.
    D) the value of y does not depend on the value of x.

Answer: D

482) A graph measures y on the vertical axis and x on the horizontal. The curve on the graph is a vertical   482) _____
    line. From this fact we know that
    A) the value of x does not change when the value of y changes.
    B) the value of y is constant.
    C) the ratio of y to x is constant.
    D) the ratio of x to y is constant.

Answer: A

483) The graph of two variables, *x* and *y*, is a horizontal line. This result indicates that *x* and *y* are

483) _____

    A) falsely related.   B) positively related.

    C) negatively related.   D) not related.

Answer: D

484) Consider a diagram in which the variable measured on the *y*-axis remains constant while the variable measured on the *x*-axis increases. The graph is of this relationship is a

484) _____

    A) line with slope equal to zero.   B) line that has a negative slope.

    C) perpendicular line.   D) line that has positive slope.

Answer: A

485) An independent relationship between two variables is shown in a graph by

485) _____

    A) a horizontal or a vertical line.   B) a steeply sloped line.

    C) an upward-sloping line.   D) a downward-sloping line.

Answer: A
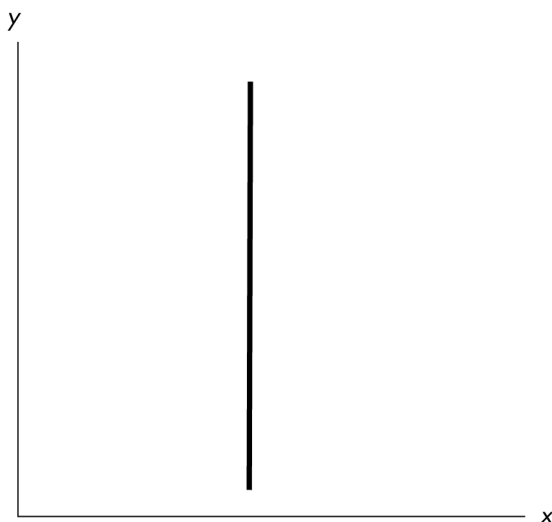
486) In the above, as the *y* variable increases

486) _____

    A) the *x* variable is constant.

    B) the *x* variable decreases.

    C) the *x* variable at first increases but then decreases.

    D) the *x* variable increases.

Answer: A

487) A graph shows the price of a pound of cucumbers on the vertical axis and the quantity of new cars sold by GM on the horizontal axis. The price of a pound of cucumbers remains constant as the quantity of new cars sold increases. The graph of these data is

487) _____

    A) a vertical line.   B) a horizontal line.

    C) a positively-sloped line.   D) a curve with a maximum.

Answer: B

488) If two variables are unrelated, a scatter diagram of those variables will   488) _____
     A) be a horizontal line.   B) have a constant positive slope.
     C) be either a vertical or horizontal line.   D) be a vertical line.
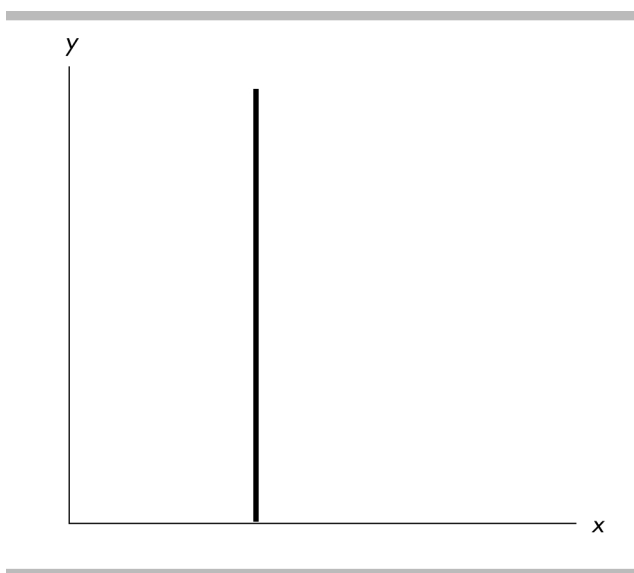
    Answer: C

489) Which of the following correctly describes the above figure?   489) _____
     A) There is a positive relationship between x and y.
     B) There is no relationship between x and y.
     C) There is a negative relationship between x and y.
     D) None of the above answers are correct.
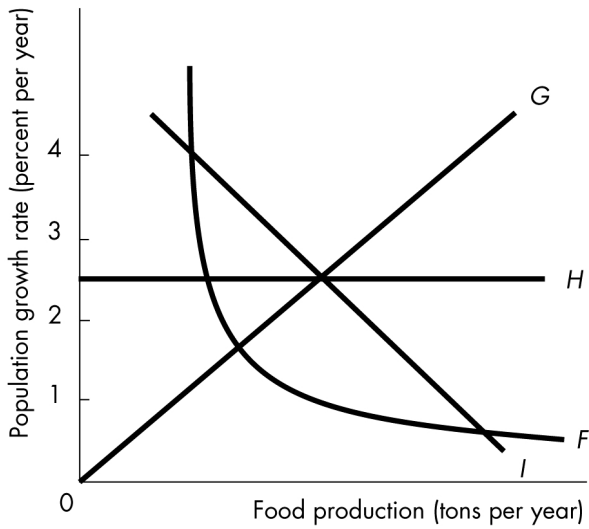
    Answer: B

490) In the above figure, which curve indicates that the level of food production does not affect the 490) _____
population growth rate?

A) *F*   B) *I*   C) *G*   D) *H*
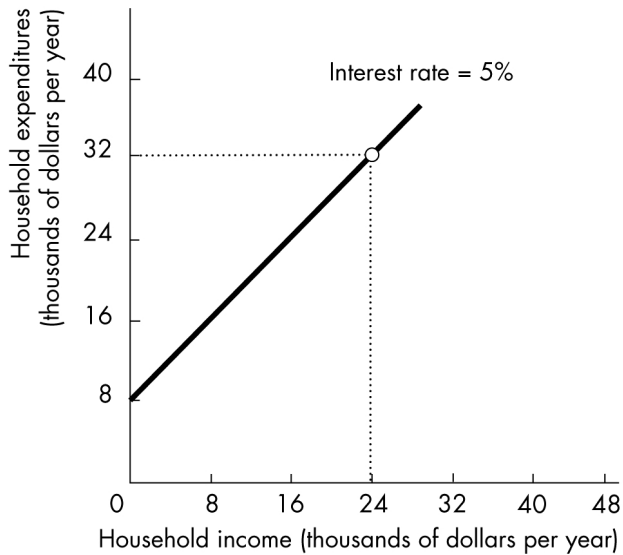
Answer: D

491) In the above figure, the relationship between income and expenditures is 491) _____

A) negative.   B) positive.   C) random.   D) independent.

Answer: B

492) The relationship in the above figure suggests that when the interest rate is 5 percent,
    A) an increase in income will be associated with a decrease in expenditures.
    B) a decrease in income will be associated with a decrease in expenditures.
    C) a decrease in income will be associated with an increase in expenditures.
    D) there is no relationship between expenditures and income.

492) _____

Answer: B

493) If variables *x* and *y* move up and down together, they are
    A) trend related.   B) unrelated.
    C) negative related.   D) positively related.

493) _____

Answer: D

494) The term "direct relationship" means the same as
    A) correlation.   B) negative relationship.
    C) positive relationship.   D) trend.

494) _____
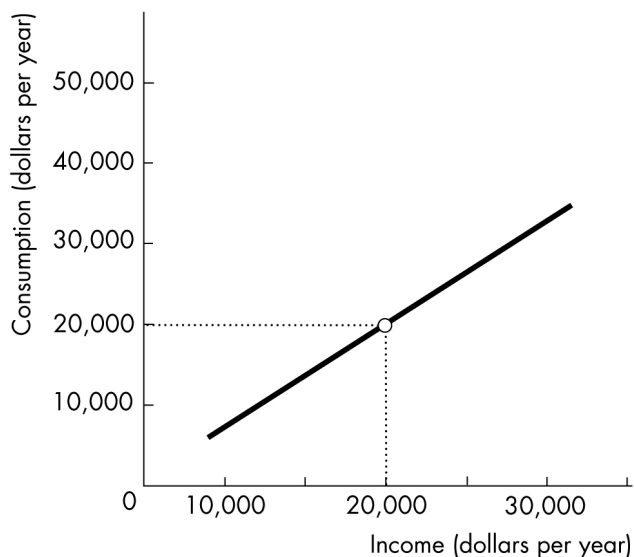
Answer: C

495) The relationship between income and consumption illustrated in the figure above is
    A) positive and linear.   B) negative and nonlinear.
    C) negative and linear.   D) positive and nonlinear.

495) _____
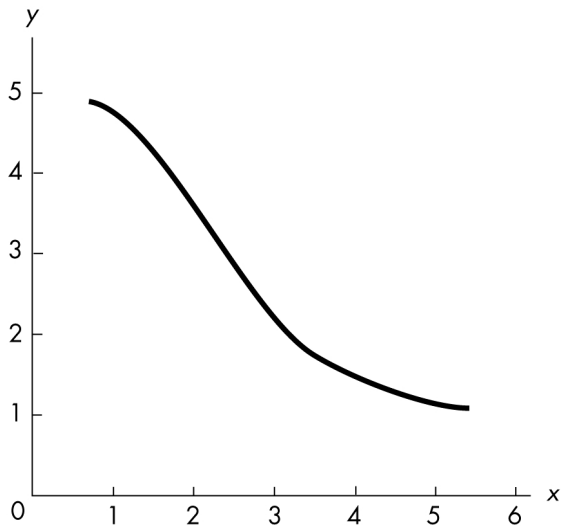
Answer: A

496) The figure above shows   496) _____
    A) a time-series relationship.   B) a negative relationship.
    C) a positive relationship.   D) no relationship between the variables.

Answer: B

497) The relationship between two variables, x and y, is a vertical line. Thus x and y are   497) _____
    A) negatively correlated.   B) positively correlated.
    C) falsely related.   D) not related.

Answer: D

498) The slope of a line equals the   498) _____
    A) change in the variable measured along the y-axis divided by the change in the variable
       measured along the x-axis.
    B) change in the variable measured along the x-axis multiplied by the change in the variable
       measured along the y-axis.
    C) change in the variable measured along the x-axis divided by the change in the variable
       measured along the y-axis.
    D) change in the variable measured along the x-axis minus the change in the variable measured
       along the y-axis.

Answer: A

499) "The change in the value of the variable measured on the y-axis divided by the change in the value   499) _____
of the variable measured on the x-axis" is the definition of
    A) slope.   B) a curve.   C) a graph.   D) a relation.

Answer: A

500) The slope of a curve between Y (measured on the vertical axis) and X (measured on the horizontal axis) is

    A) zero.

    B) the percentage change in Y divided by the percentage change in X.

    C) the change in Y divided by the initial value of X.

    D) the change in Y divided by the change in X.

Answer: D

501) Suppose that as the price of concert tickets increases, the number of concerts you wish to attend decreases. The curve showing the relationship between these two variables would have

    A) a positive slope.   B) a negative slope.

    C) a zero slope.   D) NONE OF THE ABOVE IS correct.

Answer: B

502) The slope of a line

    A) measures the ratio of the change in the value of the y-axis variable relative to the change in the value of the x-axis variable.

    B) is always a constant.

    C) can never equal zero.

    D) measures the value of the y-axis variable relative to the value of the x-axis variable.

Answer: A

503) The slope of a positive relationship is

    A) positive.

    B) positive to the right of the maximum point and negative to the left.

    C) constant as long as the relationship is nonlinear.

    D) undefined.

Answer: A

504) In which of the following cases is the slope of a line positive?

    A) As x increases, y remains the same.

    B) As x increases, y decreases.

    C) As x increases, y equals a positive number.

    D) As x increases, y increases.

Answer: D

505) If a large change in the variable measured on the x-axis is associated with a small change of the variable measured on the y-axis, the line is _____ and the slope is _____.

    A) upward-sloping; small

    B) downward-sloping; small

    C) downward-sloping; large

    D) either downward or upward-sloping; small

Answer: D

506) Suppose we are considering the relationship between two variables y and x. y is measured on the y-axis and x is measured on the x-axis, and the relationship between then is a line. Suppose that the slope of the line is positive and is less than 1. This slope means that a change in x is associated with

    A) no change in y.   B) a smaller change in y.

    C) a bigger change in y.   D) an equal change in y.

Answer: B

507) Suppose we are considering the relationship between two variables y and x. y is measured on the y-axis and x is measured on the x-axis, and the relationship between then is a line. Suppose that the slope of the line is equal to 1. This slope means that
    A) a change in x is associated with a bigger change in y.
    B) a change in x is associated with an equal change in y.
    C) a change in x is associated with a smaller change in y.
    D) a change in x is associated with no change in y.

507) _____

Answer: B

508) Suppose we are considering the relationship between two variables y and x. y is measured on the y-axis and x is measured on the x-axis, and the relationship between then is a line. Suppose that the slope of the line is greater than 1. This slope means that
    A) a change in x is associated with an equal change in y.
    B) a change in x is associated with a smaller change in y.
    C) a change in x is associated with no change in y.
    D) a change in x is associated with a bigger change in y.

508) _____

Answer: D

509) In which of the following cases is the slope of a line positive and less than infinity?
    A) As the variable measured on the y-axis increases, the variable measured on the x-axis does not change.
    B) As the variable measured on the y-axis increases, the variable measured on the x-axis decreases.
    C) As the variable measured on the x-axis decreases, the variable measured on the y-axis decreases.
    D) As the variable measured on the x-axis increases, the variable measured on the y-axis decreases.

509) _____

Answer: C

510) In a graph, a line has a negative slope if
    A) the line is horizontal.
    B) the line rises from right to left.
    C) the line is vertical.
    D) the line rises from left to right.

510) _____

Answer: B

511) Suppose that for a curve, as the variable measured on the x-axis increases, the variable measured on the y-axis decreases. The curve has a _____ slope.
    A) tangent   B) positive   C) hypothetical   D) negative

511) _____

Answer: D

512) If the slope of the relationship between savings and interest rates is 0.5, then
    A) savings and interest rates have an inverse relationship.
    B) savings and interest rates have no relationship.
    C) savings and interest rates have a positive relationship.
    D) savings and interest rates have a negative relationship.

512) _____

Answer: C

513) If an increase in x (the variable on the horizontal axis) from 6 to 8 units causes a decrease in y (the variable on the vertical axis) from 4 to 3 units, the slope equals
    A) -2.   B) 2.   C) -1/2.   D) 1/2.

513) _____

Answer: C

x	y
0	0
2	6
4	12
6	18
8	24
10	30

514) In the table above, *y* is measured along the *y*-axis and *x* along the *x*-axis. The slope of the relationship between *x* = 0 and *x* = 2 is
    A) 3.   B) 6.   C) -6.   D) 2.

514) _____

Answer: A

x	y
10	50
9	70
8	100
7	130
6	170
5	220

515) In the table above, *y* is measured along the *y*-axis and *x* along the *x*-axis. What is the value of the slope between the *x* = 8 and *x* = 6?
    A) 70   B) -35   C) -0.057   D) -19.28

515) _____

Answer: B

Point	X	Y
a	100	50
b	200	75
c	300	100
d	400	100
e	500	75
f	600	50

516) In the table above, *Y* is measured along the *y*-axis and *X* along the *x*-axis. The slope between points a and b is
    A) -0.25.   B) 0.25.   C) 4.   D) 25.

516) _____

Answer: B

517) In the table above, *Y* is measured along the *y*-axis and *X* along the *x*-axis. The slope between points c and d is
    A) 0.   B) 0.25.   C) -4.   D) 100.

517) _____

Answer: A

518) In the table above, Y is measured along the y-axis and X along the x-axis. The slope between points e and f is

    A) -25.   B) 4.   C) -0.25.   D) 0.25.

Answer: C
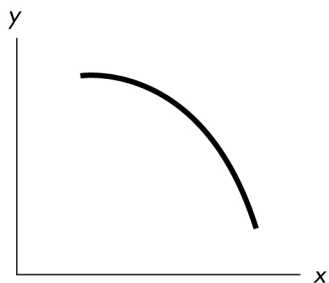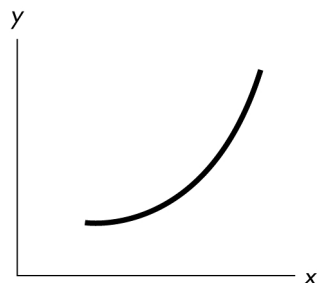
Figure A   Figure B
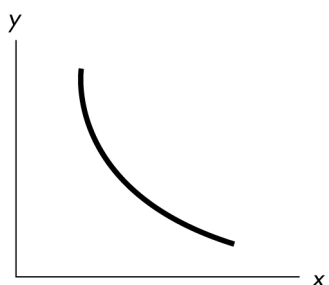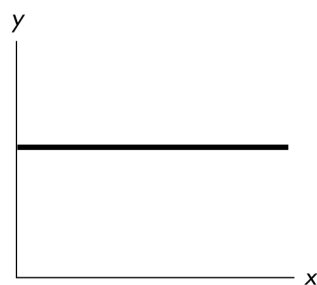
Figure C   Figure D

519) In the above figure, if there is a negative relationship between the variables x and y, which of the graphs above can be used to indicate this?

    A) Figure A   B) Figure B
    C) Figure C   D) both Figure A and Figure C

Answer: D

520) In the above figure, which of the graphs demonstrates a curve with a decreasing slope, that is, a slope getting smaller in magnitude as x increases?

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

Answer: C
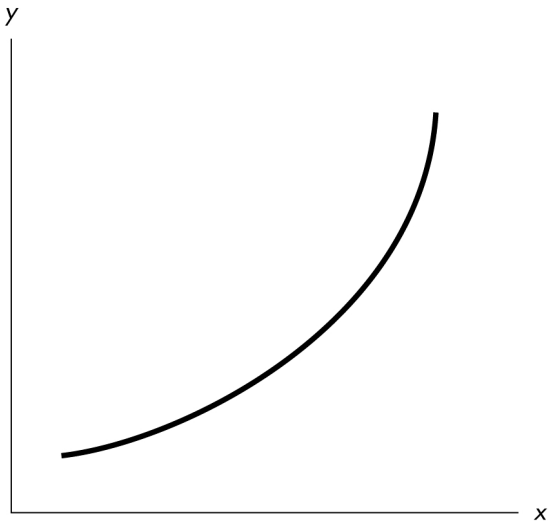
521) In the above figure, the curve has a slope that is _____. 521) _____
   A) positive and becoming smaller in magnitude
   B) positive and becoming larger in magnitude
   C) negative and becoming smaller in magnitude
   D) negative and becoming larger in magnitude

   Answer: B
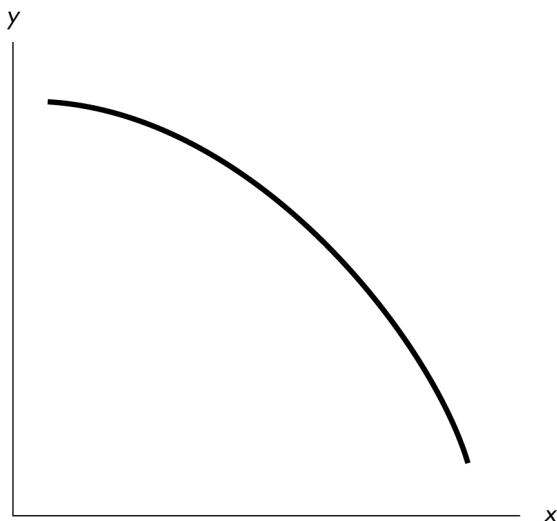
522) In the above figure, the curve has a slope that is _____.

    A) positive and becoming larger in magnitude

    B) negative and becoming smaller in magnitude

    C) negative and becoming larger in magnitude

    D) positive and becoming smaller in magnitude

Answer: C

x	y
0	4
1	5
2	8
3	13
4	20

523) In the above table, the relationship between x and y is _____ and, with y measured on the vertical axis, the slope between $y = 5$ and $y = 8$ is equal to _____.

    A) negative; 6   B) positive; 5   C) positive; 3   D) negative; 8

Answer: C

524) The slope of a straight line is

    A) variable.   B) increasing.   C) constant.   D) decreasing.

Answer: C

525) The slope of a straight line is

    A) always equal to zero.   B) constant.

    C) calculated as y/x at any point.   D) always greater than zero.

Answer: B

526) The slope of a straight line
   A) is constantly changing.
   B) equals the angle the line makes with the x-axis.
   C) is the change in the value of the variable measured on the y-axis divided by the change in the value of the variable measured along the x-axis.
   D) is always positive.

   Answer: C

527) With y measured on the vertical axis and x measured on the horizontal axis, the slope of a straight line is defined as
   A) (change in x)/ (change in y).   B) (change in y)/ (change in x).
   C) y/x.   D) x/y.

   Answer: B

528) The slope of a straight line is 3/4. When x equals 20, y equals 14. When x equals 32, y equals
   A) 23.   B) 26.   C) 9.   D) 17.

   Answer: A

529) The slope of a straight line is 3. When x equals 10, y equals 33. When x equals 11, y equals
   A) 39.   B) 30.   C) 36.   D) 27.

   Answer: C

530) Along a straight line, when x equals 90, then y equals 30. When x equals 120, then y equals 40. The slope of the straight line is
   A) -3.   B) 1/3.   C) -1/3.   D) 3.

   Answer: B

531) Along a straight line, the value of y is always equal to the value of x. The slope of the line is
   A) 1.   B) infinite.   C) 0.   D) -1.

   Answer: A

532) If the change in y = -4, and the change in x = 2, there is
   A) a negative relationship between y and x.
   B) an independent relationship between y and x.
   C) no relationship between y and x.
   D) a positive relationship between y and x.

   Answer: A

533) If the change in y = 10, and the change in x = 3, there is
   A) an independent relationship between y and x.
   B) no relationship between y and x.
   C) a negative relationship between y and x.
   D) a positive relationship between y and x.

   Answer: D

534) The change in *y* = -20, and the change in *x* = -4. Thus there is
  A) no relationship between *y* and *x*.
  B) a negative relationship between *y* and *x*.
  C) an independent relationship between *y* and *x*.
  D) a positive relationship between *y* and *x*.

  Answer: D

534) _____

x	*y*
0	0
1	3
2	6
3	9
4	12
5	15

535) Using the data in the table above, with *y* measured on the vertical axis, the slope of the line relating 535) _____
 y to *x* is
  A) 1.   B) 3.   C) 1/3.   D) 6.

  Answer: B

x-variable (on the horizontal axis)	*y*-variable (on the vertical axis)
10	28
15	31
20	34

536) The above table shows data on two variables. If these data were graphed, the slope of the line 536) _____
 would be
  A) 5/3.
  B) 3.
  C) 3/5.
  D) impossible to determine from the information given.

  Answer: C

x-variable (on the horizontal axis)	*y*-variable (on the vertical axis)
8	14
10	18
12	22

537) The above table gives data on two variables. If these data were graphed, the slope of the line would 537) _____
 be
  A) 1.   B) 2.   C) -2.   D) -4.

  Answer: B

538) The above table gives data on two variables. If these data were graphed, their relationship would   538) _____
    A) be a straight line.   B) nonexistent.
    C) be a curved line.   D) show a negative relationship.

Answer: A

x-variable (on the horizontal axis)	y-variable (on the vertical axis)
100	50
200	125
300	200

539) The above table shows data on two variables. If these data were graphed, the slope of the line   539) _____
would be
    A) 1/2.   B) 3/4.   C) 4/3.   D) 2/3.

Answer: B

Quantity	Price
0	50
8	40
16	30
24	20
32	10
36	5

540) Using the data in the above table,   540) _____
    A) an increase in price is likely to cause an increase in quantity.
    B) the variables quantity and price are neither positively nor negatively related.
    C) the variables quantity and price are negatively related.
    D) the variables quantity and price are positively related.

Answer: C

541) If we use the numbers in the above table to draw a graph, with the price on the vertical axis and the   541) _____
quantity on the horizontal axis, the curve relating price and quantity has a slope of
    A) 8.0.   B) -8.0.   C) 0.8.   D) -1.25.

Answer: D

Income (dollars per month)	Amount spent on restaurant meals (dollars per month)
50	20
100	40
150	60
200	80

542) Using the data in the above table, if income is on the x-axis and the amount spent on restaurant meals is on the y-axis, the graph of the two variables would be

A) horizontal.

B) upward sloping.

C) vertical.

D) downward sloping.

542) _____

Answer: B

543) Using the data in the above table, if income is on the x-axis and the amount spent on restaurant meals is on the y-axis, the slope of the straight line graph equals

A) 0.2.   B) 0.5.   C) 2.5.   D) 0.4.

543) _____

Answer: D

x	y
100	500
200	300
300	100
400	-100

544) Based on the information in the table above, what is the relationship between x and y?

A) inverse

B) direct

C) positive

D) No relationship exists between x and y.

544) _____

Answer: A

545) Using the information in the table above, what is the value of the slope between x and y?

A) 5   B) -2   C) 2   D) -0.5

545) _____
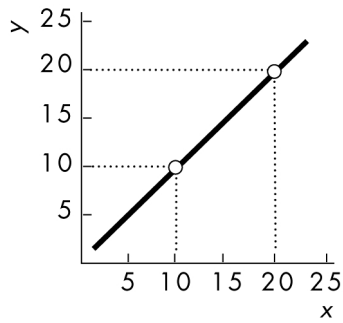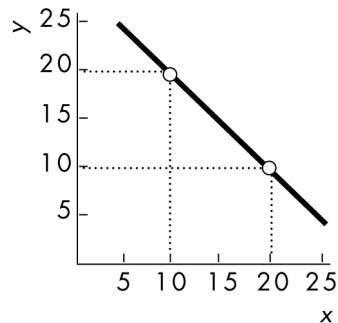
Answer: B

Figure A

Figure B

546) In the above, which figure shows a linear relationship?   546) _____
    A) Figure A   B) Figure B
    C) both Figure A and Figure B   D) neither Figure A nor Figure B

    Answer: C

547) In the above, which figure shows a line with a slope of 1.0?   547) _____
    A) Figure A   B) Figure B
    C) both Figure A and Figure B   D) neither Figure A nor Figure B

    Answer: A
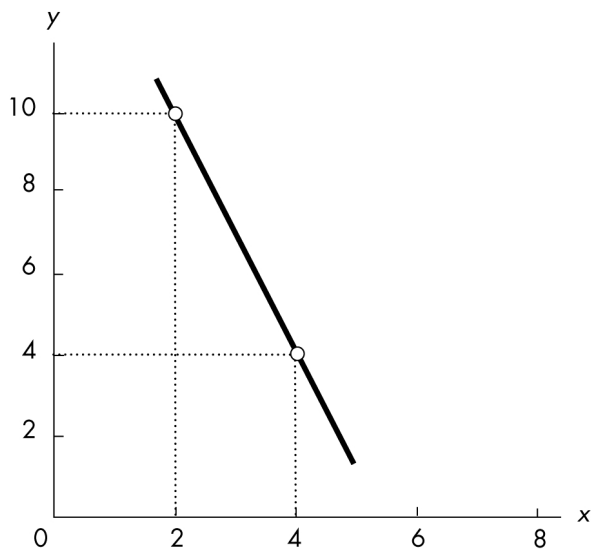
548) The slope of the line shown in the above figure is   548) _____
    A) -3.   B) -1.   C) -5.   D) -1/3.

    Answer: A
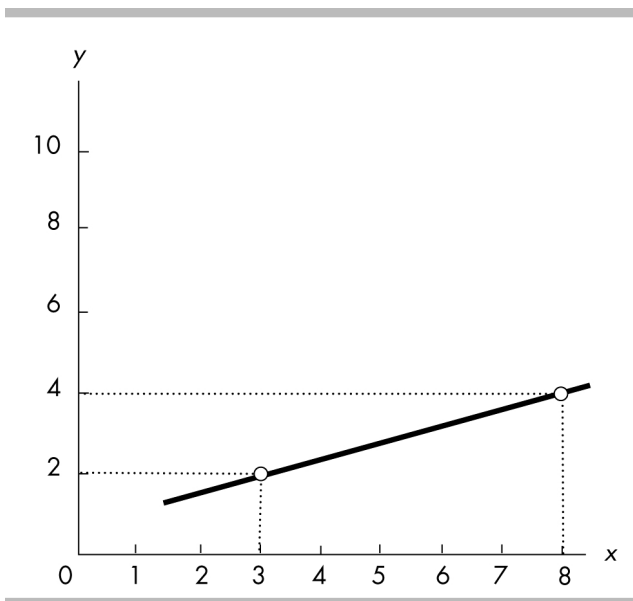
549) The slope of the line shown in the above figure is

A) 2/3.   B) 5/2.   C) 5.   D) 2/5.
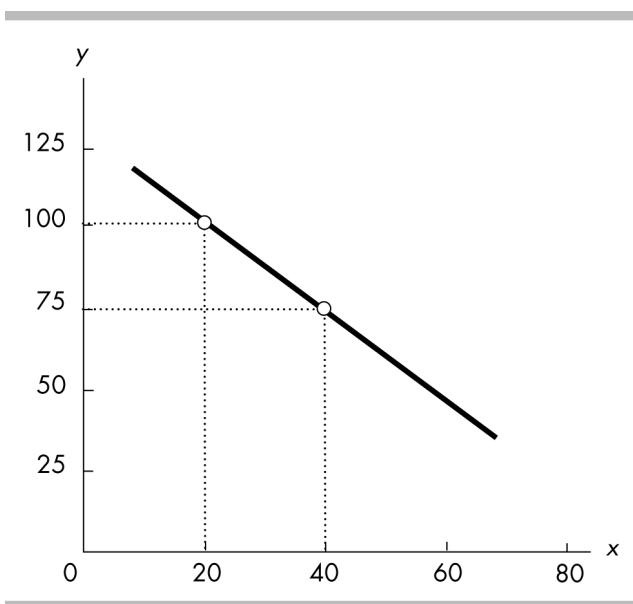
Answer: D

550) The slope of the line shown in the above figure is

A) -1 1/3.   B) -1.25.   C) -0.80.   D) -1 2/3.
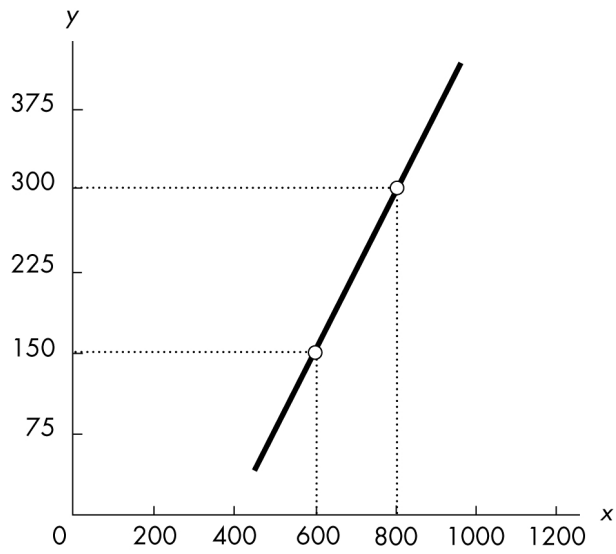
Answer: B

551) The slope of the line shown in the above figure is
     A) 0.75.   B) 2.   C) 1 1/3.   D) 0.25.   551) _____

Answer: A
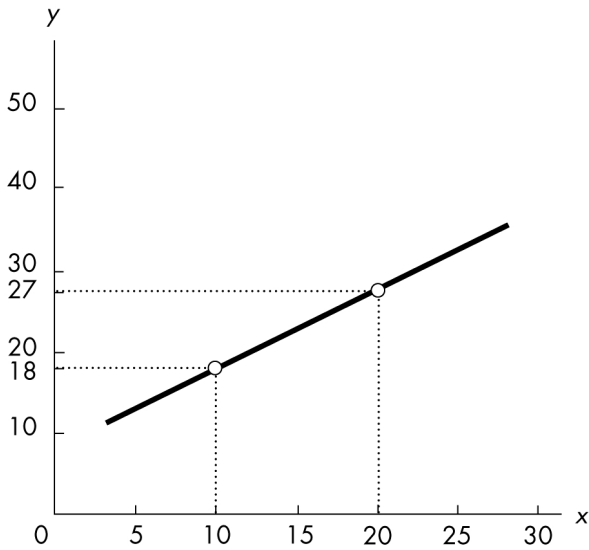
552) The slope of the line shown in the above figure is
     A) 1.11.   B) 1.5.   C) 2.   D) 0.90.   552) _____

Answer: D
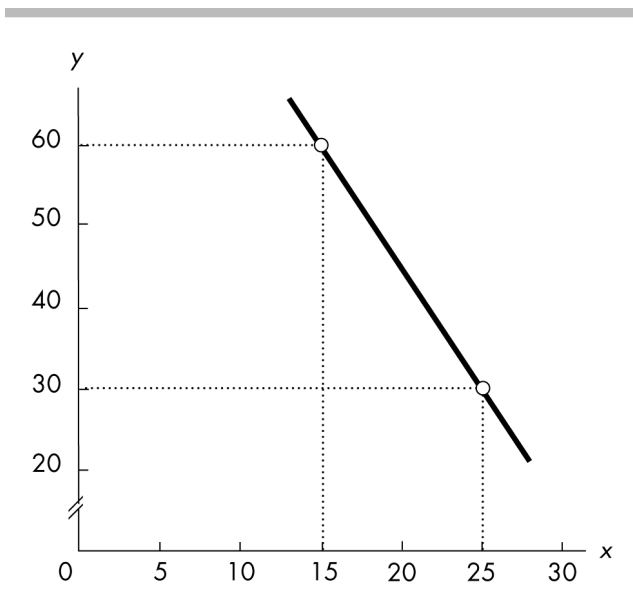
553) The slope of the line in the above figure is

    A) -3.   B) -1/3.   C) -4.   D) -1/2.

553) ____

Answer: A
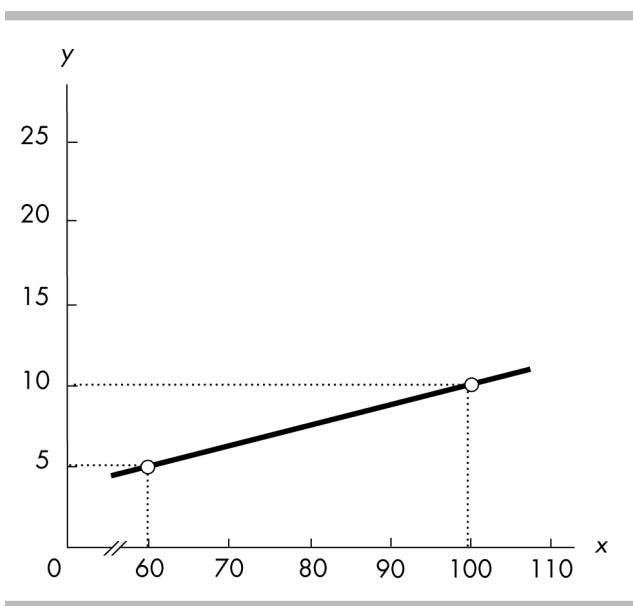
554) The slope of the line in the above figure is

    A) 0.10.   B) 0.05.   C) 0.125.   D) 8.

554) ____

Answer: C
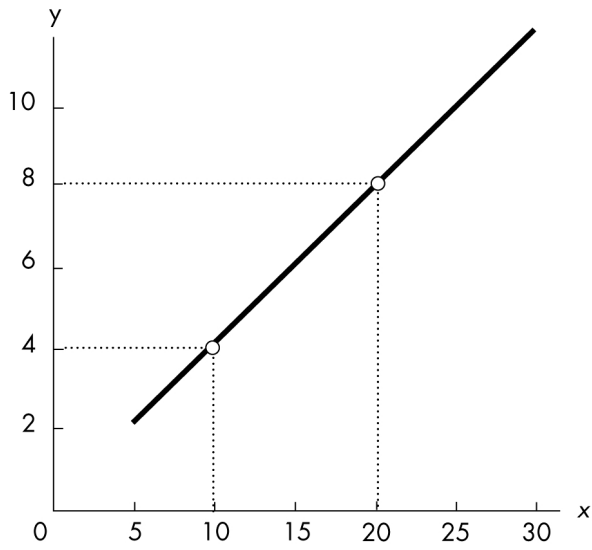
555) The slope of the line in the above figure is

    A) 5/2 = 2.5.   B) 2/5 = 0.4.   C) -2/5 = -0.4.   D) -5/2 = -2.5.

555) _____

Answer: B
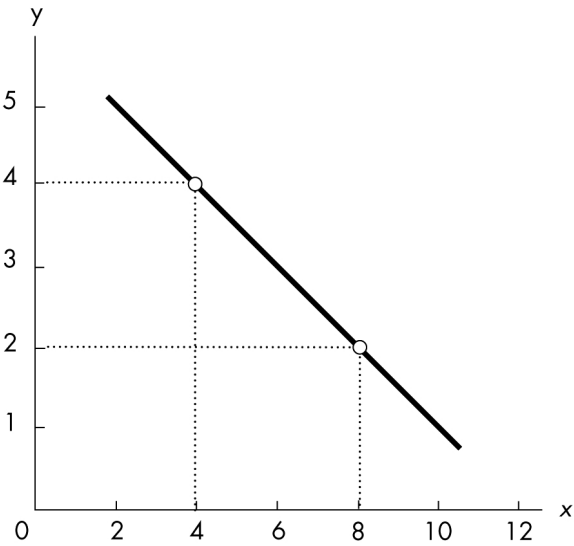
556) The slope of the line in the above figure is

    A) 2.   B) 1/2 = 0.5.   C) -2.   D) -1/2 = -0.5.

556) _____

Answer: D
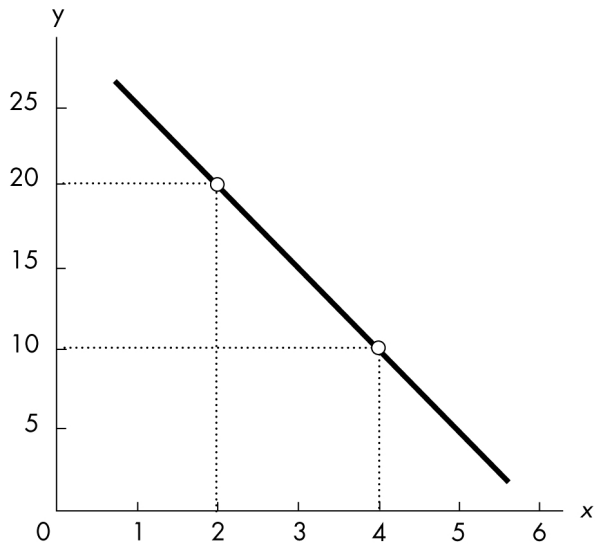
557) The slope of the line in the above figure is   557) _____
   A) 5.   B) -5.   C) -10.   D) 10.
   Answer: B
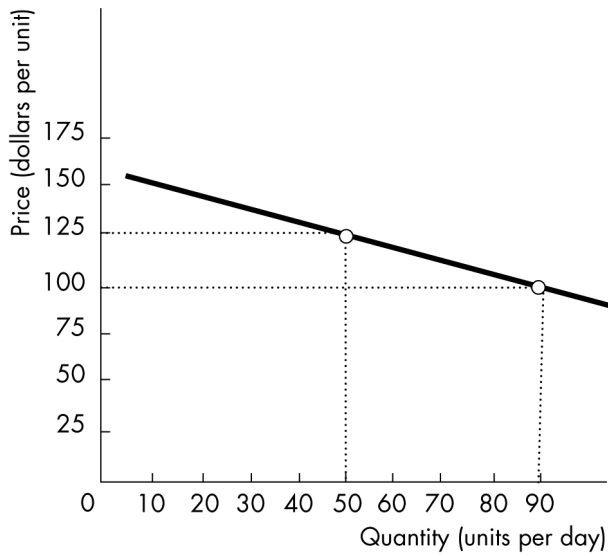
558) The slope of the line shown in the above figure is   558) _____
   A) 5/8.   B) -0.625.   C) -1 3/8.   D) -1 2/3.
   Answer: B
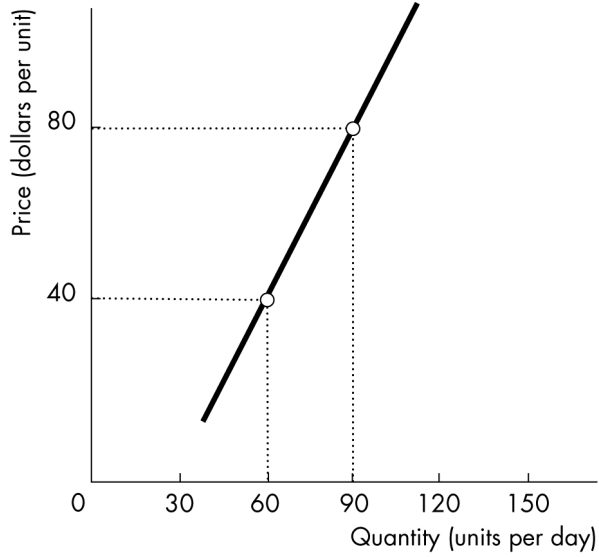
559) The slope of the line shown in the above figure is

    A) 1 1/3.   B) 3/4.   C) 1 3/4.   D) 2/3.

559) _____

    Answer: A

560) On a graph, an upward-sloping curve that is flatter as you move away from the origin indicates a

    A) negative relationship with an increasing slope.
    B) negative relationship with a decreasing slope.
    C) positive relationship with a decreasing slope.
    D) positive relationship with an increasing slope.

560) _____

    Answer: C
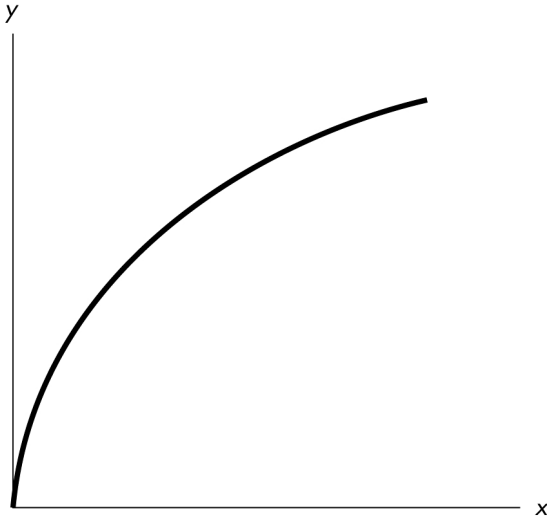
561) In the above figure, the curve's slope is

    A) negative and is becoming less steep.   B) negative and is becoming steeper.

    C) positive and is becoming less steep.   D) positive and is becoming steeper.

Answer: C

562) If the price of apples is on the vertical axis and the quantity of apples demanded is on the horizontal axis, the slope between two points on the line describing the relationship between price and quantity is

    A) price divided by quantity.

    B) the change in price divided by the change in quantity.

    C) the change in quantity divided by the change in price.

    D) the change in price multiplied by the change in quantity.

Answer: B

563) The formula for the slope across an arc is used to approximate the slope for

    A) a negative relationship only.   B) a curved line.

    C) a positive relationship only.   D) linear relationships only.

Answer: B

564) The slope of a curved line can be approximated by

    A) the slope across an arc from one point on the curve to another point on the curve.

    B) the average of the variable measured along the y-axis divided by the average of the variable measured along the x-axis.

    C) the average of the variable measured along the x-axis divided by the average of the variable measured along the y-axis.

    D) the inverse of the straight-line method.

Answer: A
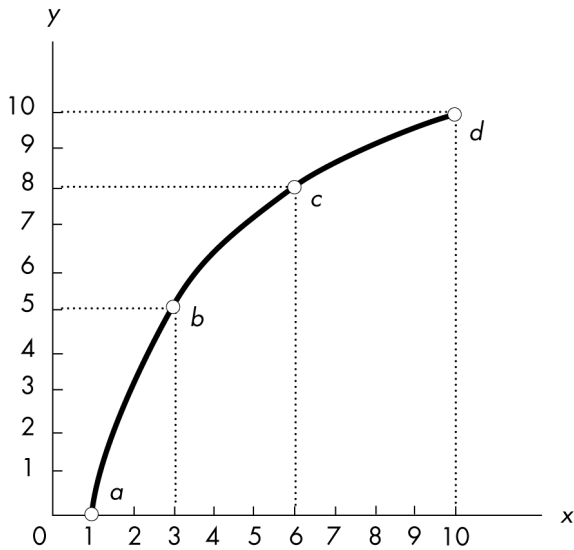
565) In the above figure, the slope across the arc between *c* and *d* is
565) _____
   A) 1/2.   B) 4/3.   C) 1.   D) 2.

Answer: A

566) In the above figure, the slope across the arc between *b* and *c* is
566) _____
   A) 1.   B) 1/2.   C) 2.   D) 2/3.

Answer: A

567) In the above figure, the slope across the arc between *a* and *b* is
567) _____
   A) 5/2.   B) 3/2.   C) 2/5.   D) 1.

Answer: A

568) In the above figure, the slope at point *b* is
568) _____
   A) between 1 and 5/2.   B) greater than 5/2.
   C) 5/2.   D) 1.

Answer: A

569) In the above figure, the relationship between *x* and *y* is
569) _____
   A) positive, with slope increasing as *x* increases.
   B) negative, with slope increasing as *x* increases.
   C) positive, with slope decreasing as *x* increases.
   D) negative, with slope decreasing as *x* increases.

Answer: C

570) The slope in the above figure is
570) _____
   A) negative and decreasing.   B) positive and increasing.
   C) positive and decreasing.   D) negative and increasing.

Answer: C

110
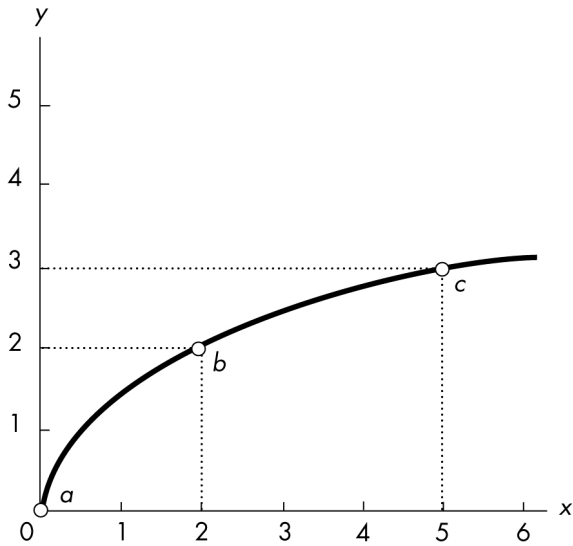
571) In the above figure, using the slope across an arc, the slope of the curve between points *b* and *c* is   571) _____
    A) 3.   B) -3.   C) 1/3.   D) -1/3.

Answer: C

572) In the above figure, using the slope across an arc, the slope of the curve between points *a* and *c* is   572) _____
    A) 5/3.   B) -5/3.   C) 3/5.   D) -3/5.

Answer: C
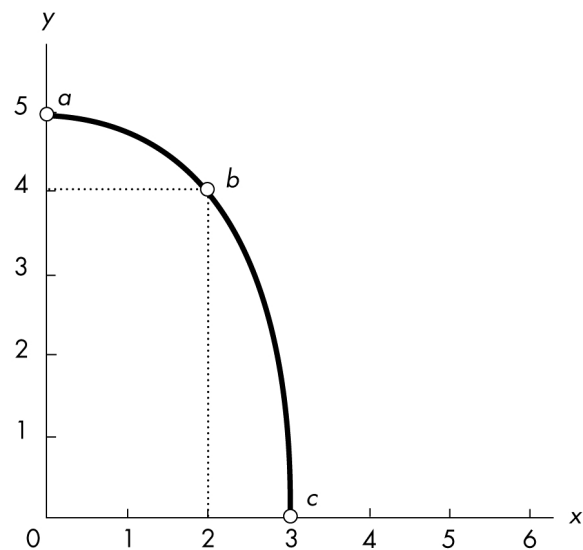
573) In the above figure, using the slope across an arc, the slope of the curve between points *a* and *b* is   573) _____
    A) -2.   B) 1/2.   C) -1/2.   D) 2.

Answer: C

574) In the above figure, using the slope across an arc, the slope of the curve between points *a* and *c* is   574) _____
  A) 5/3.   B) -5/3.   C) -3/5.   D) 3/5.
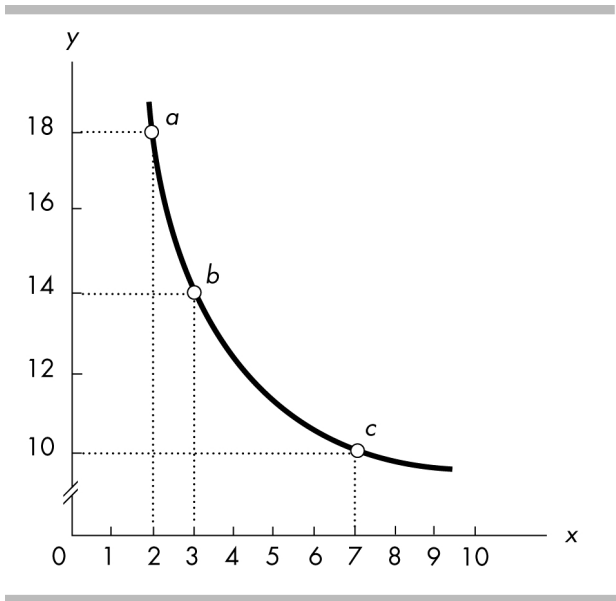
Answer: B

575) In the above figure, the slope across the arc between *a* and *b* is   575) _____
  A) -4.   B) 1.   C) 1/4.   D) -1/4.
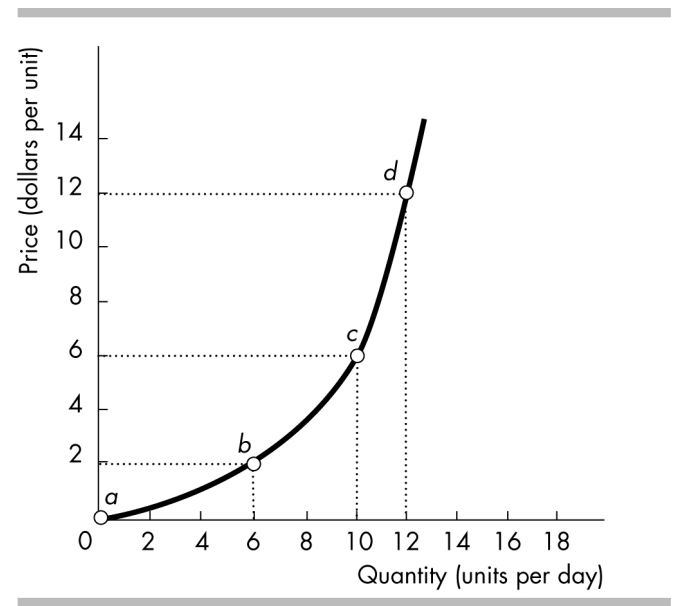
Answer: A

576) In the above figure, the slope across the arc between *b* and *d* is   576) _____
  A) 6/5.   B) 5/3.   C) 1/2.   D) 1/3.

Answer: B

577) In the above figure, the slope at point *b* 577) _____
    A) lies between 1 and 2. B) lies between 1/3 and 1.
    C) equals 1. D) exceeds 2.
    Answer: B

578) In the above figure, the slope across the arc between *c* and *d* is 578) _____
    A) 12/11. B) 4. C) 3. D) 1/6.
    Answer: C

579) In the above figure, the slope across the arc between *a* and *b* is 579) _____
    A) 1/3. B) 3. C) 1. D) 3/5.
    Answer: A
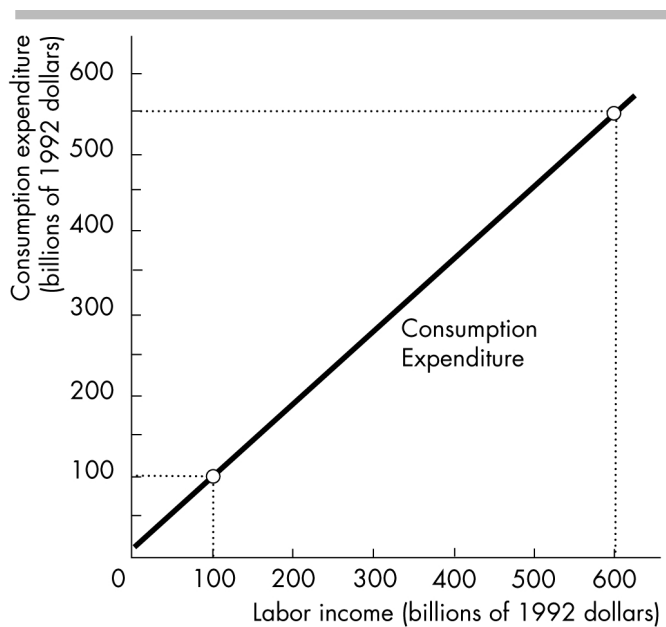
580) In the above figure, 580) _____
    A) consumption expenditures are a linear function of labor income.
    B) consumption expenditures are positively related to labor income.
    C) the slope of the function depicted is 0.9.
    D) All of the above answers are correct.
    Answer: D

113

Interest rate = 5%

Household expenditures (thousands of dollars per year) vs. Household income (thousands of dollars per year)
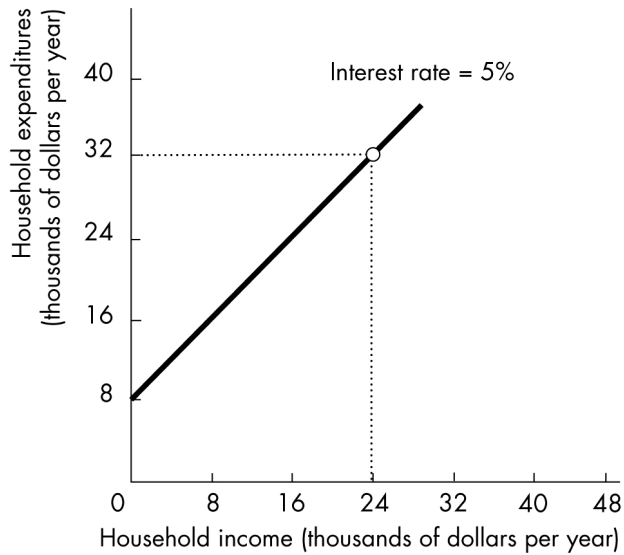
581) The slope of the line in the above figure is

    A) -4.   B) 1.0.   C) -1.0.   D) -2.5.

581) _____

Answer: B

582) The slope of a negative relationship is

    A) undefined.

    B) constant as long as the relationship is nonlinear.

    C) negative.

    D) positive to the right of the maximum point and negative to the left.

582) _____

Answer: C

583) A linear relationship

    A) never has a constant slope.   B) always has a maximum.

    C) always slopes up to the right.   D) always has a constant slope.

583) _____

Answer: D

114
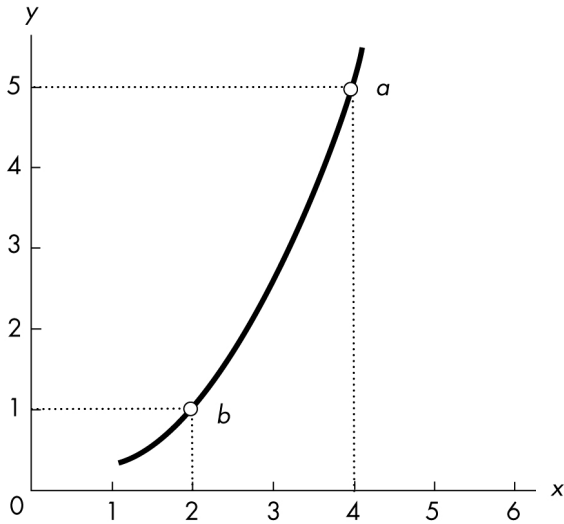
584) The relationship between *x* and *y* in the above figure is

584) _____

    A) negative with a decreasing slope.   B) positive with an increasing slope.

    C) positive with a decreasing slope.   D) negative with an increasing slope.

Answer: B

585) In the above figure, the slope across the arc between points *a* and *b* equals

585) _____

    A) 2.   B) 4.   C) 1.   D) 5.
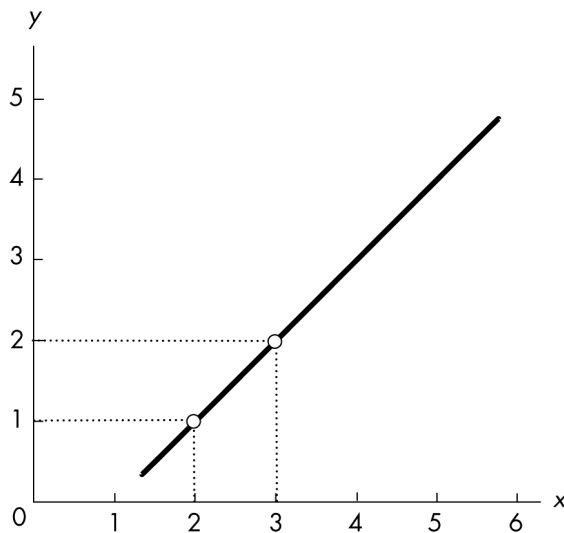
Answer: A

586) In the above figure, between *x* = 2 and *x* = 3, what is the slope of the line?

586) _____

    A) 1   B) -1   C) 3   D) 2

Answer: A

587) In the above figure, how does the slope of the line between $x = 4$ and $x = 5$ compare with the slope between $x = 2$ and $x = 3$?

    A) The slope is greater between $x = 2$ and $x = 3$.
    B) The slope is the same.
    C) The slope is not comparable.
    D) The slope is greater between $x = 4$ and $x = 5$.

587) _____

Answer: B

588) *Ceteris paribus* when graphing a relationship refers to

    A) changing the origin of the graph.
    B) rescaling the coordinates.
    C) holding constant all but two variables.
    D) letting all the variables change at once.

588) _____

Answer: C

589) In evaluating a relationship between x and y, *ceteris paribus* means other variables

    A) move in opposite directions to x and y.
    B) move with x and y.
    C) are not relevant to x and y.
    D) are not changing while x and y change.

589) _____

Answer: D

590) On a graph showing the relationship between x and y, the *ceteris paribus* condition implies that

    A) the value of x is held constant.
    B) other variables not shown are held constant.
    C) the value of y is held constant.
    D) no other variables are related to x and y.

590) _____

Answer: B

591) Assume that the quantity consumed of pizza is dependent on three factors: the price of a pizza, the income of pizza purchasers, and consumers' taste for pizza. When graphing the relationship between the price of a pizza and the quantity of pizza consumed

    A) the price of pizza and quantity consumed of pizza are the only variables that are allowed to change.
    B) the price of a pizza and the income of pizza consumers are the only variables that are allowed to change.
    C) consumers' taste for pizza and the income of pizza purchasers are the only variables that are allowed to change.
    D) None of the above answers are correct.

591) _____

Answer: A

592) To graph a relationship among several variables, we hold all but _____ variable(s) constant and use the _____ assumption.

    A) one; scarcity
    B) one; *ceteris paribus*
    C) two; *ceteris paribus*
    D) three; marginal benefit

592) _____

Answer: C

593) If consumption expenditures are positively related to non-labor income, then if non-labor income were higher than that corresponding to the function in the above figure,

    A) consumption expenditures would be the same at any level of labor income as that depicted above.
    B) consumption expenditure would be higher at any level of labor income than depicted above.
    C) consumption expenditure would be lower at any level of labor income than depicted above.
   D) We cannot say how the function depicted above would be affected.

593) _____

Answer: B
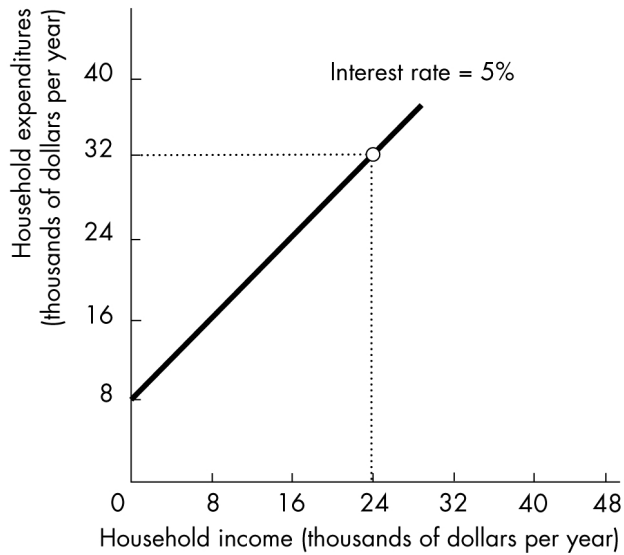
Interest rate = 5%

594) In the above figure, while moving along the line showing the relationship between household income and expenditure,

    A) the interest rate is held constant.

    B) household expenditures are held constant.

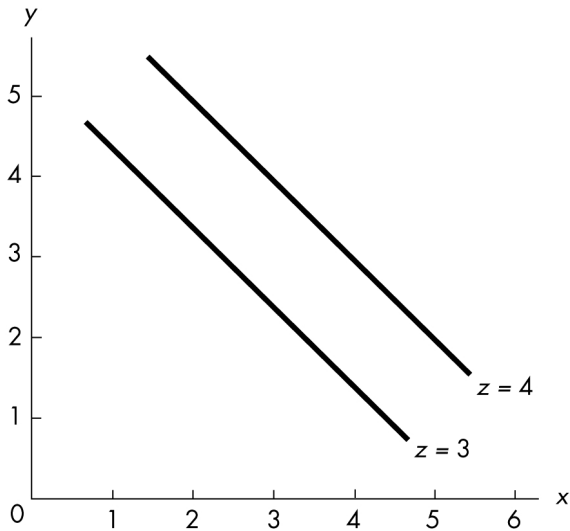   C) household income is held constant.

    D) no variable is held constant.

Answer: A

594) _____

595) In the above figure, if the interest rate is negatively related to household expenditures for any given level of household income, an increase in the interest rate will

    A) shift the line vertically downward.   B) shift the line vertically upward.

    C) cause no change in the line's position.   D) make the line negatively sloped.

Answer: A

595) _____
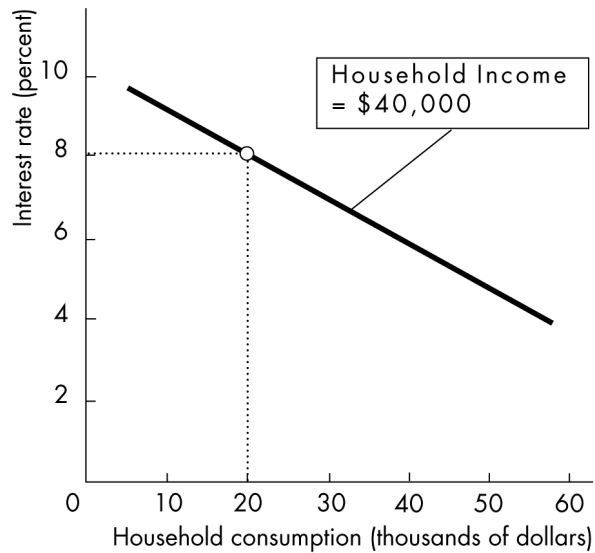
596) The slope of the line in the above figure is   596) _____
    A) independent.   B) negative.   C) positive.   D) direct.

Answer: B

597) In the above figure, when the interest rate is 8 percent and household income is $40,000, household   597) _____
consumption is
    A) $35.000.   B) $60,000.   C) $0.   D) $20,000.

Answer: D

598) The relationship in the above figure indicates that   598) _____
    A) a decrease in household income will lead household consumption to increase.
    B) a decrease in the interest rate leads to a decrease in household income.
    C) a decrease in household consumption leads to a decrease in interest rates.
    D) none of the above

Answer: D

599) Household consumption depends on both income and interest rates. In the above figure   599) _____
    A) household consumption is held constant.   B) interest rates are held constant.
    C) no variable is held constant.   D) household income is held constant.

Answer: D

600) In the above figure, if household consumption is positively related to household income as well as   600) _____
related to the interest rate, then an increase in household income will
    A) shift the line rightward.   B) make the line positively sloped.
    C) cause a movement along the line.   D) shift the line leftward.

Answer: A

601) The above figure shows how many pounds of peanuts farmers are willing to sell at different prices per pound of peanuts. If the price of a pound of peanuts is $1 and the price of a pound of pecans is $2, peanut farmers are willing to sell

601) _____

   A) 1000 pounds of peanuts.   B) no peanuts.

   C) 2000 pounds of peanuts.   D) 4000 pounds of peanuts.

Answer: B

602) In the above figure, while drawing the line showing the relationship between the price of a pound of peanuts and the quantity sold, the

602) _____

   A) price of a pound of pecans is held constant.

   B) quantity of peanuts that farmers supply is constant.

   C) price of a pound of peanuts is held constant.

   D) Both answers A and B are true.

Answer: A

603) In the figure above, suppose the price of a pound of pecans is negatively related to the quantity of peanuts that farmers are willing to supply. If the price of pecans increases

603) _____

   A) the curve will shift rightward.   B) the curve will be unaffected.

   C) the curve will shift leftward.   D) there is a movement along the curve.

Answer: C

604) In the above figure, *x* is

    A) positively related to both *y* and *z*.
    B) negatively related to both *y* and *z*.
    C) negatively related to *y* and positively related to *z*.
    D) positively related to *y* and negatively related to *z*.

    Answer: C

604) _____

605) In the figure above, *ceteris paribus*, an increase in *x* is associated with

    A) a decrease in *y*.   B) a decrease in *z*.
    C) an increase in *y*.   D) None of the above answers is correct.

    Answer: C

605) _____

606) In the figure above, an increase in *z* leads to a

    A) shift rightward in the line showing the relationship between *x* and *y*.
    B) movement up along one of the lines showing the relationship between *x* and *y*.
    C) movement down along one of the lines showing the relationship between *x* and *y*.
    D) shift leftward in the line showing the relationship between *x* and *y*.

    Answer: A

606) _____

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

607) Why do economists use graphs?

    Answer: Graphs help economists, and others, to visualize the relationships between economic variables. Graphs that plot variables together help economists understand if the variables are related and how they are related. Graphs also help provide a visual picture of economic models that link different variables. Indeed, many other disciplines use such visual models. For example, architects work with blueprints (their model) and the blueprints represent every detail of a building. Economists' models do not reflect of every detail of the real world, but the graphs that they use nonetheless are valuable because they help clarify the linkages between the variables.

608) What are three main kinds of graphs?

    Answer: The three main types of graphs are scatter diagram, time-series graph, and cross-section diagram.

609) What kind of information is conveyed in a time-series graph?

Answer: A time series graph reveals four types of information. First, it shows the actual value of the variable(s) at each point in time. Second, it shows whether the variable(s) is rising or falling as time passes. Third, it shows the speed with which the variable(s) is changing. Finally, it shows the presence—or absence—of a trend.

610) What are the two different types of relationships that variables can have? Explain each. What do these relationships look like when they are graphed?

Answer: Variables can have two relationships: positive (or direct) and negative (or inverse). A positive relationship occurs when the variables move in the same direction, so that when one increases, the other also increases. A negative relationship occurs when the variables move in the opposite direction, so that when one increases, the other decreases. When a positive relationship is graphed, the line slopes upward to the right. When a negative relationship is graphed, the line slopes downward to the right.

611) What is the difference between a positive and a negative relationship?

Answer: Two variables are positively related when an increase (decrease) in one is associated with an increase (decrease) in the other. In this case, the variables move together, in the same direction. Two variables are negatively related when an increase (decrease) in one is associated with a decrease (increase) in the other. In this case, the variables move in the opposite direction.

612) A graph of two variables is a vertical line. What is the interpretation of this result?

Answer: When the graph of two variables is a vertical line, the variables are not related because, with this graph, whenever the variable measured along the vertical axis changes, the variable measured along the horizontal axis does not change.

613) What does the slope of a straight line equal? How is the slope of a curved line calculated?

Answer: The slope of a straight line is calculated between two points on the line. Between the two points on the line, the slope equals the change in the value of the variable measured on the vertical axis (the y-axis) divided by the change in the value of the variable measured on the horizontal axis (the x-axis). The slope of a curved line is calculated at a point on the line. At that point on the curved line, draw a straight line that touches the curved line at only that point. Then, calculate the slope of the straight line. The slope of the curved line at that point equals the slope of the straight line.

614) "It is impossible to represent a three variable relationship in a two-dimensional graph." Is this statement true or false? Explain your answer.

Answer: The statement is false because it is possible to represent a three variable relationship in a two dimensional graph. To do so, start by focusing on two of the variables. Assume that the third variable does not change (the *ceteris paribus* assumption) and then graph the relationship between the two variables. The graph shows how these two variables are related when the third variable does not change. When the third variable does change, then the entire relationship between the two graphed variables changes. In other words, the line showing the relationship between the two graphed variables shifts so that it becomes an entirely new line. The shift in the line shows how the third variable influences the other two.
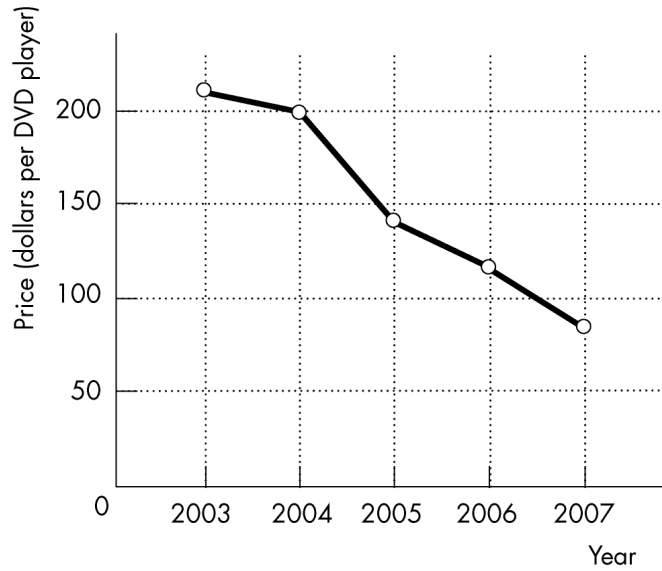
615) The figure above shows the price of a DVD player from 2003 to 2007.
   a)   What type of graph is illustrated above?
   b)   What is the trend in the price of a DVD player?

   Answer: a)   The graph is a time-series graph because it plots time along the horizontal axis and the price of a DVD player along the vertical axis.
   b)   The trend in the price of a DVD player is negative, that is, the price of a DVD player has generally dec from one year to the next.

Advertising (dollars) — vertical axis
Games sold (number of games) — horizontal axis

616) The figure above shows how the sales of the video game "Tomb Raider—Lara Retires" change when the advertising spent on the game changes. Is the relationship between advertising and the number of games sold positive, negative, or neither? Explain your answer.

    Answer: The figure shows that there is a positive relationship between advertising and the number of video games sold. The relationship is positive because the two variables move together: If advertising increases, so, too, does the number of games sold.

SAT Score (points) / Hours on the web (per week)
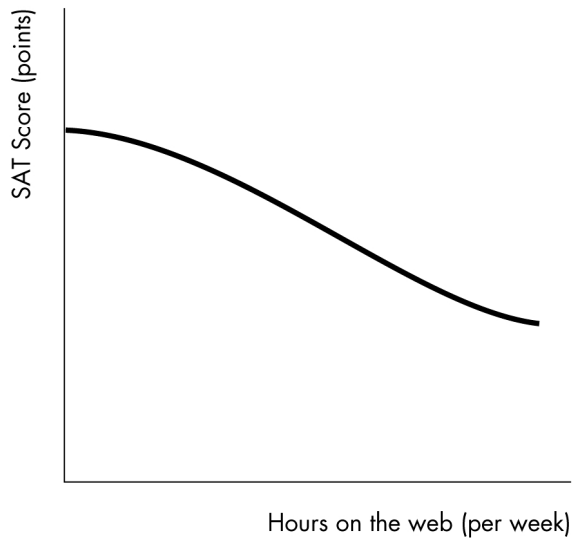
617) The figure above shows how the relationship between the number of hours per week a high school student spends on the web and the student's SAT score. Is the relationship between hours on the web and the SAT score positive, negative, neither? Explain your answer.

Answer: The figure shows that there is a negative relationship between hours on the web and the student's SAT score. The relationship is negative because the two variables move in opposite directions: If hours on the web increase, the SAT score decreases.

618) A graph has a point that is either a maximum or a minimum. To the left of the point, the slope of relationship is positive. To the right of the point, the slope is negative. Is the point a maximum point or a minimum point? Be sure to draw a figure that supports your answer.

Answer:
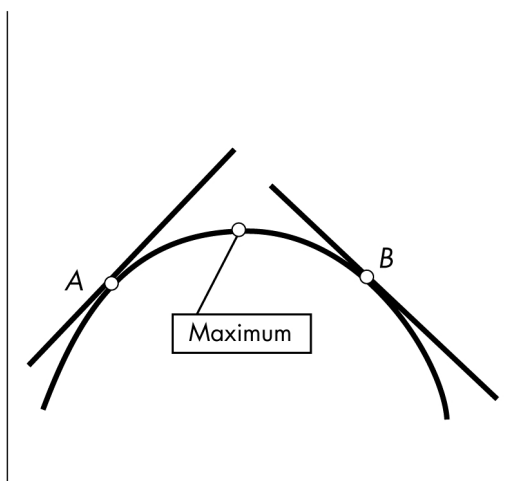
The point is a maximum point. Examine the figure above. The slope of a curved line at any point equals th of a straight line that touches the curved line at only that one point. Thus to the left of the maximum point, point A. The slope of the straight line that touches the curved line at only point A is positive, so the slope c relationship is positive. Similarly, take point B to the right of the maximum point. As the straight line shov the slope of the relationship at point B is negative. Indeed, whenever there is a maximum point, the slope of the relationship to the left of the maximum is positive and the slope to the right is negative.
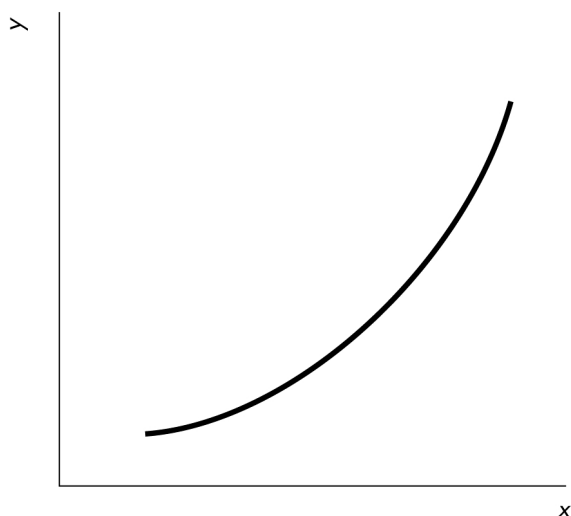
619) In the figure above, what can you deduce about the slope of the curve?

Answer: The slope is positive and increasing in size as we move rightward along the curve.

620) If two points on a line are $x = 2$, $y = 5$ and $x = 7$, $y = 10$, what is the slope of this line?

Answer: The slope equals the change in the y-variable divided by the change in the x-variable. So, the slope equals $(10 - 5)/(7 - 2) = (5)/(5) = 1.00$.

Katie's income (dollars per year)	Katie's purchases (books per year)
50,000	14
70,000	16
90,000	18
110,000	20

621) The table above shows how the number of books Katie buys each year depends on her income.

   a)   What kind of relationship exists between Katie's income and the number of books she purchases?

   b)   Plot the relationship between Katie's income and the number of books she purchases in the above figure. Me income along the vertical axis and the number of books along the horizontal axis. Be sure to label the axes.

   c)   What is the slope of the relationship between $50,000 and $70,000 of income?

   d)   What is the slope of the relationship between $90,000 and $110,000 of income?

   e)   Comment on the similarity or dissimilarity of your answers to parts (c) and (d).

Answer: a)   There is a positive relationship. When Katie's income increases, so too does her purchase of books.
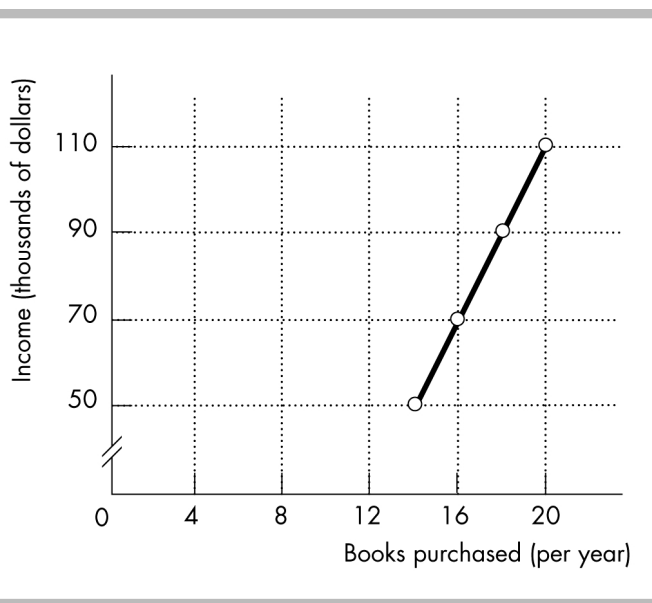
   b)   The relationship is plotted in the figure above.

   c)   The slope equals the change in the value of the variable measured on the vertical axis, income, divided change in the value of the variable measured along the horizontal axis, the number of books. Between $50 and $70,000 of income, the number of books purchased increases from 14 to 16. Hence income increases by $20,000 and the number of books increases by 2, so the slope equals $20,000/2 = 10,000.

   d)   As with the previous answer, the slope equals the change in income divided by the change in books. Between $90,000 and $110,000 of income, the number of books purchased increases from 18 to 20. Hence in increases by $20,000 and the number of books increases by 2, so the slope equals $20,000/2 = 10,000.

   e)   The slopes in parts (c) and (d) are equal. But, they *must* be equal because the relationship between Kat income and the number of books she purchases is linear. For a linear relationship, the slope is the same regardless of where it is measured.
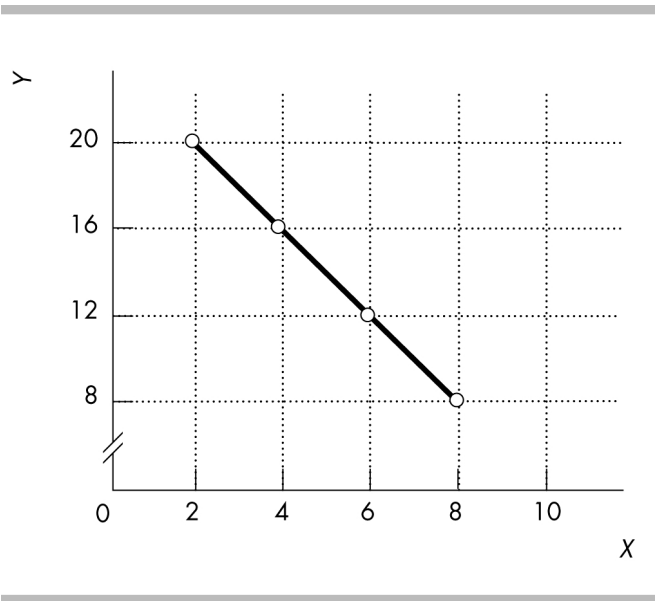
X	Y
2	20
4	16
6	12
8	8
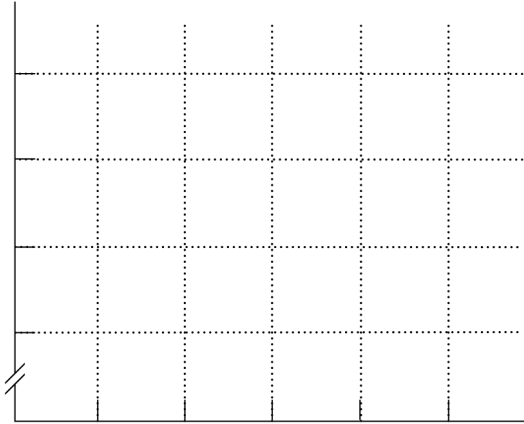
622) Graph the data in the table above in the figure. Label the axes.
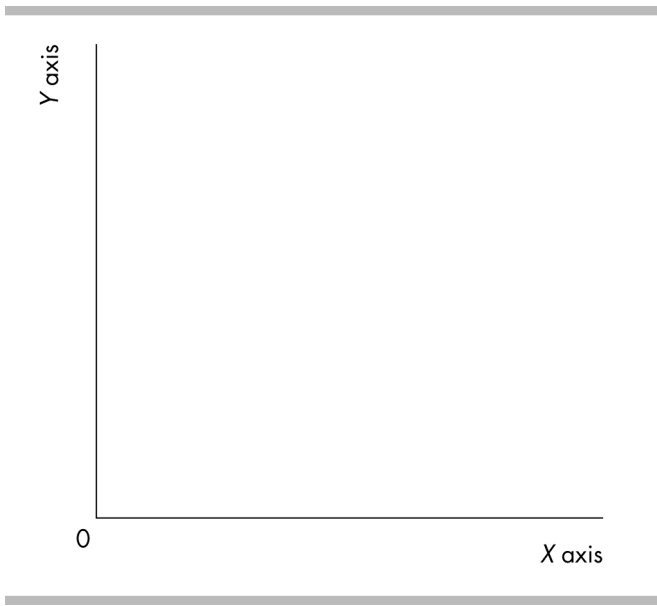   a) Is the relationship between X and Y positive or negative?
   b) What is the slope when X = 4?
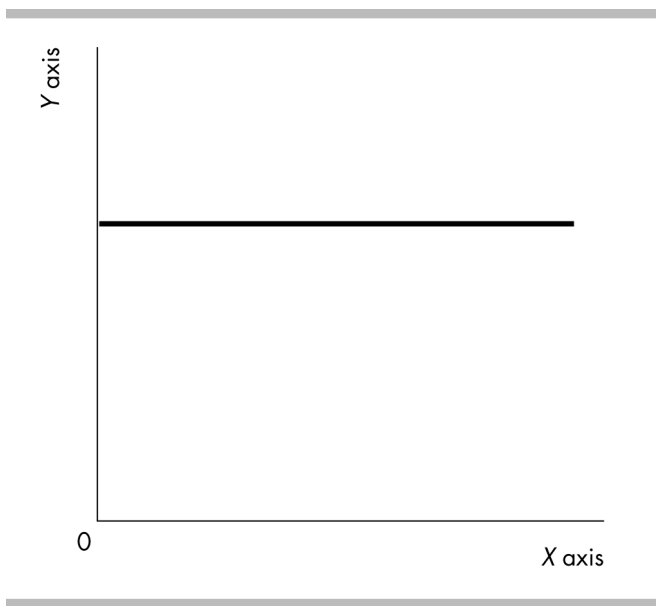   c) What is the slope when X = 8?

Answer:

The figure labels the axes and graphs the relationship.
a) The relationship between X and Y is negative.
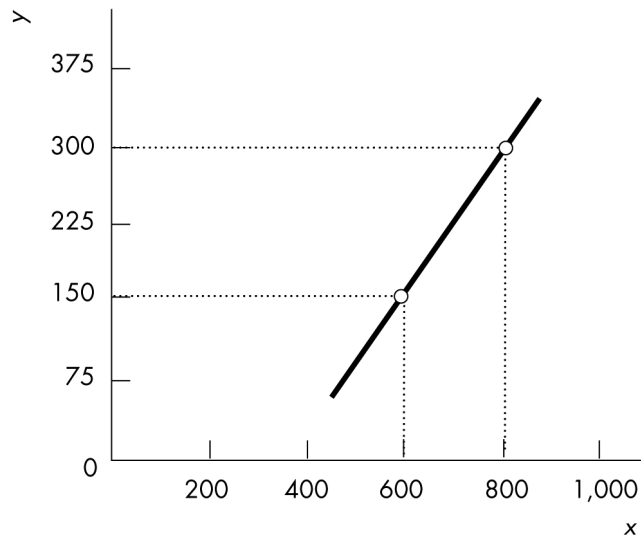b) The slope equals -2.
c) The slope equals -2.
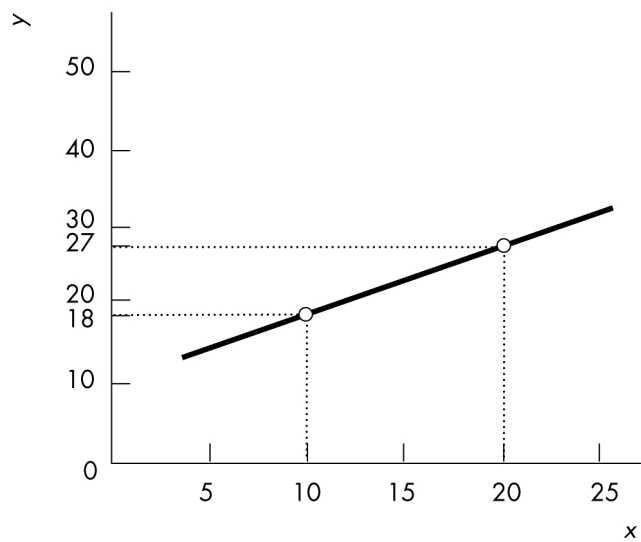
623) In the above diagram, draw a straight line with a slope of zero.

Answer:

A horizontal line has a slope of zero. The figure above shows a horizontal line with a slope of zero.

624) What does the slope of the line shown in the above figure equal?

Answer: The slope equals the change in variable on the *y*-axis divided by the change in the variable on the *x*-axis, or (150 – 300)/(600 – 800) = 0.75.
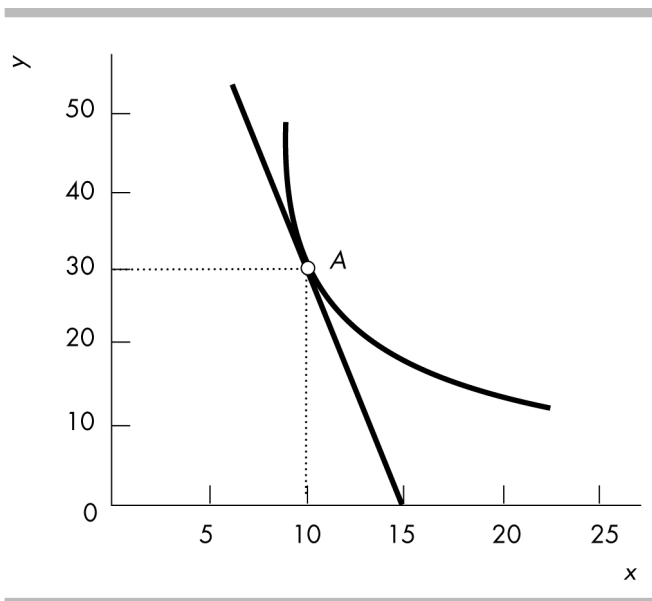

625) What does the slope of the line shown in the above figure equal?

Answer: The slope equals the change in variable on the *y*-axis divided by the change in the variable on the *x*-axis, or (18 – 27)/(10 – 20) = 0.90.
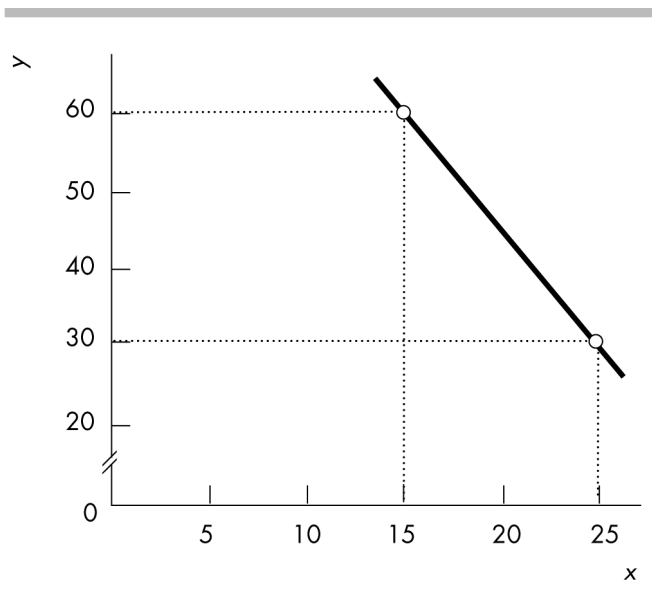
626) What does the slope of the line shown in the above figure equal?

   Answer: The slope equals the change in variable on the *y*-axis divided by the change in the variable on the *x*-axis, or (30 – 60)/(25 – 15) = –3.0.
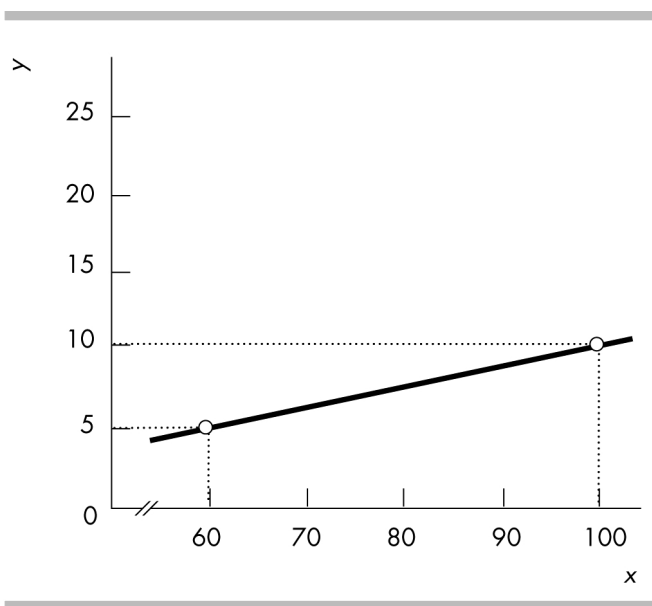
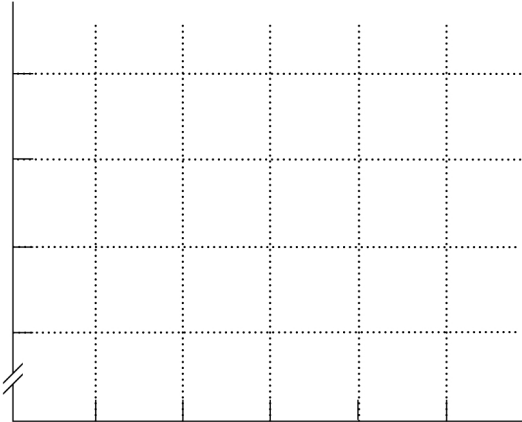627) What does the slope of the line shown in the above figure equal?

   Answer: The slope equals the change in variable on the *y*-axis divided by the change in the variable on the *x*-axis, or (5 – 10)/(60 – 100) = 0.125.

628) What does the slope of the curved line at point *A* shown in the above figure equal?

  Answer: The slope of a curved line equals the slope of a straight line that touches the curved line at only that point. And, the slope of a straight line equals the change in variable on the *y*-axis divided by the change in the variable on the *x*-axis. Measure the slope of the straight line from point *A* to where the line crosses the *x*-axis, at 15. Thus the straight line has a slope of (30 - 0)/(10 - 15) = -6. Therefore the curve line at point A also has a slope equal to -6.

Hours studies (per week)	SAT scores
2	900
4	1000
6	1050
8	1075
10	1090

629) Jamie is preparing to take his SAT tests. The table above shows how Jamie's score depends on the number of hou
week Jamie studies.
   a)   Plot the relationship in the figure, putting the hours studied on the horizontal axis.
   b)   Is the relationship you plotted positive or negative?
   c)   What happens to the slope of the relationship as hours studied increase?
   d)   Suppose Jamie can enroll in an SAT prep course and, by so doing, for every possible number of hours he stu
   score will be 100 points higher. Plot the new relationship between the number of hours studied and Jamie's SAT
   the figure.
   e)   How many variables are involved in the figure you just completed?

Answer:
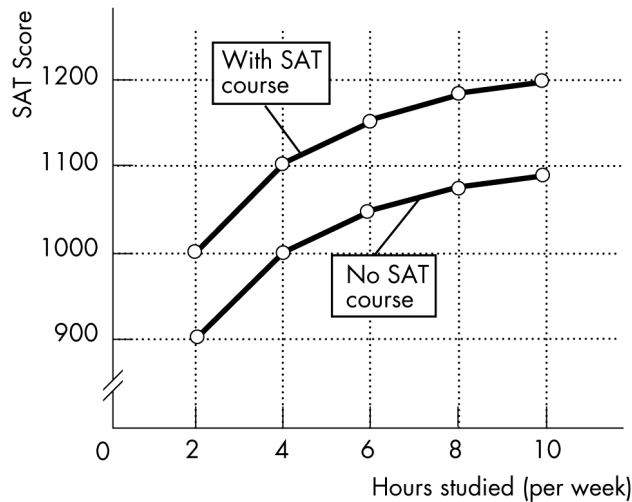
   a)   The figure above plots the relationship between the number of hours Jamie studies and his SAT score.
   b)   The relationship is positive: As Jamie increases the hours he studies, his SAT score increases.
   c)   The relationship is nonlinear, so the slope of the relationship changes as the number of hours studied
   changes. In the figure, the slope of the relationship decreases in size as the number of hours studied increa
   d)   The figure above also plots the relationship between the hours Jamie studies and his SAT score if Jami
   an SAT preparation course.
   e)   There are three variables: The number of hours Jamie studies, whether or not he takes an SAT prepara
   course, and his SAT score.

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

630) The vertical axis of a graph shows only positive values.   630) _____
   Answer: True   ✓ False

631) A scatter diagram plots the value of one economic variable against time.   631) _____
   Answer: True   ✓ False

632) A time series graph can show both the level of a variable and the speed with which the   632) _____
   variable changes over time.
   Answer: ✓ True   False

633) A trend is a general tendency for a variable to increase or decrease over time.   633) _____
   Answer: ✓ True   False

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634) A cross-section graph can show how economic variables for different groups of people vary over time.   634) _____

Answer: True   ● False

635) If the *x*-axis variable increases while the *y*-axis variable decreases, the variables *x* and *y* are negatively related.   635) _____

Answer: ● True   False

636) A graph cannot be used to show that two variables are unrelated.   636) _____

Answer: True   ● False

637) When graphed, variables that are unrelated are shown by either a horizontal or a vertical line.   637) _____

Answer: ● True   False

638) The slope of a line is the change in the *y*-axis variable divided by the change in the *x*-axis variable.   638) _____

Answer: ● True   False

639) The slope of a straight line increases as the numbers on the *x*-axis become larger.   639) _____

Answer: True   ● False

640) To calculate the slope of a curved line, you can calculate the slope at a point on the curve or across an arc of the curve.   640) _____

Answer: ● True   False

641) If the change in the *y*-axis variable is 4 and the change in the *x*-axis variable is 2, the slope of this line is 1/2.   641) _____

Answer: True   ● False

642) If the change in the *y*-axis variable is 6 and the change in the *x*-axis variable is 5, the slope of this line is 6/5.   642) _____

Answer: ● True   False

643) To graph a relationship that involves more than two variables, we use the "*ceteris paribus*" assumption.   643) _____

Answer: ● True   False

644) "*Ceteris paribus*" refers to the idea that if more than two variables are graphed, only one variable must be held constant.   644) _____

Answer: True   ● False