Exam

Name_____

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

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

2) All economic questions arise because we 2) _____
A) want more than we can get.
B) want more than we need.
C) have limited wants that need to be satisfied.
D) have an abundance of resources.

3) Economics is best defined as the study of how people, businesses, governments, and societies 3) _____
A) use their infinite resources.
B) attain wealth.
C) choose abundance over scarcity.
D) make choices to cope with scarcity.

4) Scarcity is a situation in which 4) _____
A) most people can get only bare necessities.
B) people cannot satisfy all their wants.
C) people can satisfy all their wants.
D) some people can get all they want and some cannot.

5) Economists point out that scarcity confronts 5) _____
A) the rich but not the poor.
B) the poor but not the rich.
C) neither the poor nor the rich.
D) both the poor and the rich.

6) Scarcity is 6) _____
A) eliminated by choices.
B) a situation that exists during economic recessions but not during economic booms.
C) our inability to satisfy all our wants.
D) an economic problem only for poor people.

7) When an economist talks of scarcity, the economist is referring to the 7) _____
A) ability of society to continually make technological breakthroughs and increase production.
B) inability of society to satisfy all human wants because of limited resources.
C) ability of society to consume all that it produces.
D) ability of society to employ all of its resources.

8) Fundamental economic problems basically arise from 8) _____
A) the unequal distribution of income.
B) the fact that society has more than it needs.
C) turmoil in the stock market.
D) our wants exceeding our scarce resources.

9) Scarcity exists because 9) _____
A) of the inefficient choices we make.
B) poor people need more food and other goods.
C) society and people are greedy and wasteful.
D) our wants exceed the resources available to satisfy them.

10) Scarcity can be eliminated through 10) _____
A) exploration that helps us find new resources.
B) wise use of our resources.
C) the use of market mechanisms.
D) None of the above because scarcity cannot be eliminated.

11) As an economic concept, scarcity applies to 11) _____
A) money but not time.
B) time but not money.
C) both money and time.
D) neither time nor money.

12) In every economic system, choices must be made because resources are _____ and our wants are _____. 12) _____
A) unlimited; unlimited
B) unlimited; limited
C) limited; limited
D) limited; unlimited

13) The problem of "scarcity" applies 13) _____
A) only in underdeveloped countries because there are few productive resources in these countries.
B) to all economic systems, regardless of their level of development.
C) only in economic systems that are just beginning to develop because specialized resources are scarce.
D) only in industrially developed countries because resources are scarce in these countries.

14) Scarcity requires that people must 14) _____
A) compete.
B) trade.
C) cooperate.
D) make choices.

15) People must make choices because 15) _____
A) there are many goods available.
B) of scarcity.
C) most people enjoy shopping.
D) None of the above answers is correct.

16) An incentive 16) _____
A) is the opposite of a tradeoff.
B) could be a penalty but could not be a reward.
C) could be either a reward or a penalty.
D) could be a reward but could not be a penalty.

17) An inducement to take a particular action is called 17) _____
A) the marginal benefit.
B) the marginal cost.
C) an incentive.
D) opportunity cost.

18) Economics is best defined as 18) _____
A) controlling a budget for a household.
B) making choices from an unlimited supply of goods and services.
C) how people make money and profits in the stock market.
D) making choices with unlimited wants but facing a scarcity of resources.

19) The study of economics 19) _____
A) deals mainly with microeconomics.
B) focuses mainly on individual consumers.
C) recognizes that scarcity does not affect rich nations.
D) arises from the fact that our wants exceed available resources.

20) Economics is best defined as the science of choice and how people cope with 20) _____
A) differences in needs. B) differences in wants.
C) scarcity. D) different economic systems.

21) Economics is the study of 21) _____
A) the distribution of surplus goods to those in need.
B) the choices we make because of scarcity.
C) ways to reduce wants to eliminate the problem of scarcity.
D) affluence in a morally bankrupt world.

22) The study of the choices made by individuals is part of the definition of 22) _____
A) positive economics. B) macroeconomics.
C) normative economics. D) microeconomics.

23) In part, microeconomics is concerned with 23) _____
A) factors that explain changes in the unemployment rate over time.
B) the Federal Reserve's policy decisions.
C) changes in the economy's total output of goods and services over long periods of time.
D) how a business firm decides upon the amount it produces and the price it sets.

24) The study of the decisions of individual units in the economy is known as 24) _____
A) macroeconomics. B) *ceteris paribus* study.
C) microeconomics. D) the study of incentives.

25) Studying the determination of prices in individual markets is primarily a concern of 25) _____
A) negative economics. B) positive economics.
C) microeconomics. D) macroeconomics.

26) The analysis of the behavior of individual decision–making units is the definition of 26) _____
A) normative economics. B) positive economics.
C) microeconomics. D) macroeconomics.

27) Which of the following is a microeconomic topic? 27) _____
A) How rent ceilings impact the supply of apartments.
B) Comparing inflation rates across countries.
C) How a trade agreement between the United States and Mexico affects both nations' unemployment rates.
D) How a tax rate increase will impact total production.

28) Which of the following questions is NOT a microeconomic question? 28) _____
A) How would a tax on e-commerce affect eBay?
B) Does the United States have a comparative advantage in information technology services?
C) What is Britney's opportunity cost of having another baby?
D) Can the Federal Reserve keep income growing by cutting interest rates?

29) Which of the following is an example of a microeconomic decision? 29) _____
A) an individual deciding how to allocate the time he or she has for work and leisure
B) a multinational company deciding where to relocate its world headquarter
C) a small shoe factory deciding how much leather to purchase for the next quarter's production need
D) All of the above answers are correct.

30) Which of the following is a microeconomic topic? 30) _____
A) The reasons why total employment decreases.
B) The reasons why Kathy buys less orange juice.
C) The reasons for a decline in average prices.
D) The effect of the government budget deficit on inflation.

31) Which of the following questions is a topic that would be studied by microeconomics? 31) _____
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) Why did production and the number of jobs shrink in 2009?
D) Will the current budget deficit affect the well-being of the next generation?

32) An example of a question that might be explored in microeconomics is to determine 32) _____
A) savings by the household sector.
B) why the U.S. economy has grown more rapidly than the Japanese economy.
C) the number of workers employed by Intel.
D) the total employment within the U.S. economy.

33) In part, microeconomics is concerned with the study of 33) _____
A) national output of goods and services.
B) the effect government regulation has on the price of a product.
C) unemployment and economic growth.
D) the Federal Reserve's policies.

34) The branch of economics that deals with the analysis of the whole economy is called 34) _____
A) metroanalysis. B) microeconomics.
C) macroeconomics. D) marginal analysis.

35) Macroeconomics is concerned with 35) _____
A) government decision making concerning farm price supports.
B) economy-wide variables.
C) individual consumers.
D) the effects on Ford Motor of a strike by the United Auto Workers.

36) Macroeconomics differs from microeconomics in that: 36) _____
A) macroeconomics studies the behavior of government while microeconomics looks at private corporations.
B) macroeconomics studies the decisions of individuals.
C) macroeconomics focuses on the national economy and the global economy.
D) microeconomics looks at the economy as a whole.

37) Which of the following is a macroeconomic decision or concept? 37) _____
A) how many television sets to produce
B) the unemployment rate for the entire economy
C) the price of oil
D) the unemployment rate for each firm

38) Which of the following questions is a macroeconomic issue? 38) _____
A) What is the future growth prospect for an economy?
B) How many workers should the owner of a business hire?
C) What effect would a cure for Mad Cow Disease have on the market for beef?
D) How many more pounds of cookies will a consumer purchase if the price of cookies decreases?

39) In broad terms the difference between microeconomics and macroeconomics is that 39) _____
A) macroeconomics studies the effects of government regulation and taxes on the price of individual goods and services whereas microeconomics does not.
B) microeconomics studies the effects of government taxes on the national unemployment rate.
C) they use different sets of tools and ideas.
D) microeconomics studies decisions of individual people and firms and macroeconomics studies the entire national economy.

40) Which of the following is a macroeconomic issue? 40) _____
A) How federal government budget deficits affect interest rates.
B) What determines the amount a firm will produce.
C) The cause of a decline in the price of peanut butter.
D) How a rise in the price of sugar affects the market for sodas.

41) Which of the following is a macroeconomic issue? 41) _____
A) The purchasing decisions that an individual consumer makes.
B) The effect of an increase in the tax on cigarettes on cigarette sales.
C) The hiring decisions that a business makes.
D) The effect of increasing the money supply on inflation.

42) Macroeconomic topics include 42) _____
A) studying what factors influence the price and quantity of automobiles.
B) studying the determination of wages and production costs in the software industry.
C) total, nationwide employment.
D) the impact of government regulation of markets.

43) The fact that wants cannot be fully satisfied with available resources reflects the definition of 43) _____
A) the big tradeoff.
B) for whom to produce.
C) scarcity.
D) the what tradeoff.

44) Studying the effects choices have on the individual markets within the economy is part of 44) _____
A) microeconomics. B) macroeconomics.
C) incentives. D) scarcity.

45) Economics can be defined as the social science that explains the _____. 45) _____
A) choices made by politicians
B) choices made by households
C) choices that we make as we cope with scarcity
D) choices we make when we trade in markets

46) Scarcity is a situation in which _____. 46) _____
A) some people are poor and others are rich B) something is being wasted
C) long lines form at gas stations D) we are unable to satisfy all our wants

47) Microeconomics is the study of _____. 47) _____
A) the national economy
B) all aspects of scarcity
C) the global economy
D) the choices that individuals and businesses make

48) When an economy produces more houses and fewer typewriters, it is answering the _____ part of one of the two big economic questions. 48) _____
A) "where" B) "how" C) "what" D) "for whom"

49) When firms in an economy start producing more computers and fewer televisions, they are answering the _____ part of one of the two big economic questions. 49) _____
A) "where" B) "what" C) "when" D) "for whom"

50) If Taco Bell decides to produce more tacos and fewer burritos, Taco Bell is answering the _____ part of one of the two big economic questions. 50) _____
A) "when" B) "what" C) "scarcity" D) "why"

51) When a farmer decides to raise hogs instead of cattle, the farmer is answering the _____ part of one of the two big economic questions. 51) _____
A) "for whom" B) "how" C) "what" D) "why"

52) When a country decides to produce fewer bombers and more public housing projects, it is answering the _____ part of one of the two big economic questions. 52) _____
A) "how" B) "for whom" C) "defense" D) "what"

53) When a firm decides to produce more electric cars and fewer gas guzzlers, it is most directly answering the _____ part of one of the two big economic questions. 53) _____
A) "how" B) "for whom" C) "what" D) "scarcity"

54) U.S. producers decide to produce more compact cars and fewer SUVs as the price of gasoline rises. Producers are answering the _____ part of one of the two big economic questions. 54) _____
A) "how" B) "how many" C) "what" D) "when"

55) Which of the following statements is correct? 55) _____

A) The percentage of people producing goods in the United States has steadily increased over the last 60 years.
B) The United States produces more services than goods.
C) The United States produces an equal amount of goods and services.
D) The United States produces more goods than services.

56) In the U.S. economy, which of the following statements is true? 56) _____

A) Production is divided evenly between goods and services.
B) More services are produced than goods.
C) More goods are produced than services.
D) The economy is too complex to determine the proportion of production that is devoted to producing services.

57) The largest part of what the United States produces today is _____ such as _____. 57) _____

A) services; textbooks and computers
B) goods; food and electronic equipment
C) services; trade and health care
D) goods; education and entertainment

58) When China builds a dam using few machines and a great deal of labor, it is answering the _____ part of one of the two big economic questions. 58) _____

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

59) When a textile company keeps track of its inventory using a computer and its competitor uses a pad of paper and a pencil, they are both answering the _____ part of one of the two big economic questions. 59) _____

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

60) When a California farmer decides to harvest lettuce using machines instead of by migrant workers, the farmer is answering the _____ part of one of the two big economic questions. 60) _____

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

61) An art museum decides to offer tours by having visitors listen to cassette tapes rather than have tour guides. The museum is answering the _____ part of one of the two big economic questions. 61) _____

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

62) The fact that people with higher incomes get to consume more goods and services addresses the _____ part of one of the two big economic questions. 62) _____

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

63) Which of the following is <u>NOT</u> a factor of production? 63) _____

A) the effort of farmers raising cattle.
B) the management skill of a small business owner.
C) the water used to cool a nuclear power plant.
D) the wages paid to workers.

64) Which of the following are considered factors of production used to produce goods and services? 64) _____
I. Land
II. Labor
III. Capital
IV. Entrepreneurship
A) I and II only B) I, II and III only C) I and III only D) I, II, III and IV

65) Which of the following is correct? Factors of production are 65) _____
A) only land and labor.
B) the inputs used to produce goods and services.
C) land, labor, the price system, and capital.
D) the fundamental source of abundance.

66) Factors of production include 66) _____
A) land, labor, capital and entrepreneurship.
B) only capital, land, and labor.
C) labor and capital (not land, which is fixed).
D) the economic system.

67) Factors of production include all of the following EXCEPT _____. 67) _____
A) machines made in past years. B) a wheat field that is not irrigated
C) entrepreneurship D) money

68) Factors of production are grouped into four categories: 68) _____
A) labor, capital, money, entrepreneurship B) land, labor, capital, entrepreneurship
C) land, labor, capital, money D) land, capital, money, entrepreneurship

69) Which of the following is NOT a factor of production? 69) _____
A) vans used by a bakery company for deliveries
B) wilderness areas that have yet to be developed
C) a person developing a production schedule for a new product
D) 175 shares of Microsoft stock

70) Keeping in mind economists' definition of factors of production, which of the following is NOT a factor of production? 70) _____
A) coal B) an engineer
C) low-skilled labor D) money

71) Which of the following is NOT a factor of production? 71) _____
A) 100 shares of Microsoft stock B) mineral resources
C) an apartment building D) a university professor

72) The income earned by the people who sell the services of the factor of production _____ is called _____. 72) _____
A) capital; rent B) land; profit
C) entrepreneurship; wages D) entrepreneurship; profit

73) Which factor of production earns profit? 73) _____
A) human capital B) entrepreneurship
C) money D) land

74) Which factor of production earns most income in the United States? 74) _____
A) money
B) entrepreneurship
C) capital
D) labor

75) Which of the following best defines capital as a factor of production? 75) _____
A) The knowledge and skills that people obtain from education and use in production of goods and services.
B) The gifts of nature that businesses use to produce goods and services.
C) Instruments, machines, and buildings used in production.
D) Financial assets used by businesses.

76) In economics, the term "land" means 76) _____
A) land, mineral resources, and nature's other bounties.
B) only land that is used in agricultural production.
C) land that is devoted to economic pursuits.
D) land used for agricultural and urban purposes.

77) A natural resource, such as fishing territories, is considered an example of 77) _____
A) only capital.
B) both land and labor.
C) land only.
D) land, labor, capital and entrepreneurship.

78) The "gifts of nature" are included as part of which factor of production? 78) _____
A) capital
B) land
C) entrepreneurship
D) labor

79) Copper falls into which factor of production category? 79) _____
A) capital
B) entrepreneurship
C) labor
D) land

80) Overtime worked by a JCPenney associate is considered _____ and earns _____. 80) _____
A) human capital; interest.
B) labor; profit.
C) labor; wages.
D) entrepreneurship; profit.

81) The term human capital refers to 81) _____
A) entrepreneurship and risk–taking.
B) people's knowledge and skill.
C) labor resources used to make capital equipment.
D) buildings and machinery.

82) Human capital is 82) _____
A) all capital owned by individuals, but not by corporations or governments.
B) machinery that meets or exceeds federal safety standards for use by humans.
C) all capital owned by individuals or corporations, but not by governments.
D) the skill and knowledge of workers.

83) Joy is training to become a chef. The skills she is obtaining from her training and education will increase Joy's _____. 83) _____
A) human capital
B) entrepreneurship
C) physical capital
D) None of the above answers are correct.

84) Which of the following is NOT an investment in human capital? 84) _____
A) a computer science student learns how to repair a laptop computer
B) a business student takes a seminar in using a laptop computer
C) a computer science student takes a course on programming a laptop computer
D) a student purchases a laptop computer

85) Samantha goes to college to become an engineer. This is an example of an 85) _____
A) investment in human capital. B) increase in labor.
C) increase in entrepreneurship. D) investment in physical capital.

86) In economics, the term "capital" refers to 86) _____
A) the money in one's pocket. B) buildings and equipment.
C) consumer goods. D) mineral resources.

87) Human resources that perform the functions of organizing, managing, and assembling the other resources are called 87) _____
A) venture capital. B) productive capital.
C) physical capital. D) entrepreneurship.

88) The economic resource that organizes the use of other economic resources is called 88) _____
A) labor. B) land.
C) entrepreneurship. D) capital.

89) Entrepreneurs do all of the following EXCEPT 89) _____
A) organize labor, land, and capital.
B) own all the other resources used in the production process.
C) bear risk from business decisions.
D) come up with new ideas about what and how to produce.

90) Entrepreneurs directly do all of the following except 90) _____
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.

91) Differences in income are most directly related to which of the following economic question? 91) _____
A) In what quantities are various goods and services produced?
B) What goods and services are produced?
C) How are goods and services produced?
D) Who consumes the goods and services that are produced?

92) 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 _____ part of one of the two big economic questions. 92) _____
A) "how" B) "when" C) "why" D) "for whom"

93) 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 _____ part of one of the two big economic questions. 93) _____
A) "how" B) "for whom" C) "when" D) "why"

94) One economist says that raising taxes on gas would be in the social interest. What does this economist mean? 94) _____

A) Higher taxes on gas would benefit everyone.
B) Raising taxes on gas would benefit most of the people.
C) Higher taxes on gas would benefit society as a whole.
D) Both answers A and C are correct.

95) Which of the following is NOT part of the first big economic question? 95) _____

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

96) In economics we learn that 96) _____

A) tradeoffs allow us to avoid the problem of opportunity cost.
B) opportunity costs are all of the possible alternatives given up when we make a choice.
C) tradeoffs allow us to
D) None of the above answers is correct.

97) Because we face scarcity, every choice involves 97) _____

A) money
B) an opportunity cost
C) giving up something for nothing.
D) the question "what."

98) The term used to emphasize that making choices in the face of scarcity involves a cost is 98) _____

A) accounting cost.
B) utility cost.
C) opportunity cost.
D) substitution cost.

99) The loss of the highest–valued alternative defines the concept of 99) _____

A) opportunity cost.
B) marginal benefit.
C) entrepreneurship.
D) scarcity.

100) Opportunity cost means the 100) _____

A) accounting cost minus the marginal benefit.
B) accounting cost minus the marginal cost.
C) highest–valued alternative forgone.
D) monetary costs of an activity.

101) The opportunity cost of any action is 101) _____

A) the benefit from the action minus the cost of the action.
B) the dollars the action cost.
C) all the possible alternatives given up.
D) the highest–valued alternative given up.

102) The opportunity cost of something you decide to get is 102) _____

A) all the possible alternatives that you give up to get it.
B) the value of the item minus the cost you paid for it.
C) the amount of money you pay to get it.
D) the highest valued alternative you give up to get it.

103) Opportunity cost is best defined as 103) _____
A) all the alternatives that are given up to get something.
B) the highest–valued alternative that is given up to get something.
C) how much money is paid for something, taking inflation into account.
D) how much money is paid for something.

104) Which of the following statements are correct? 104) _____
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 II B) I and III C) I only D) I, II, and III

105) Opportunity cost is defined as the 105) _____
A) highest–valued alternative given up.
B) lowest–valued alternative given up.
C) cost of not doing all of the things you would like to do.
D) total value of all the alternatives given up.

106) 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 106) _____
A) working, because you would be giving up dollars.
B) working *and* doing fix–up projects.
C) working *or* doing fix–up projects, depending on which you would have done otherwise.
D) nothing because you will enjoy the trip to Florida.

107) 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? 107) _____
A) 10 percent off your grade. B) Zero.
C) 70 percent D) 60 percent.

108) 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 108) _____
A) zero because you do not have to pay money to use the library.
B) working out at the gym.
C) not clear because not enough information is given.
D) working out at the gym, having breakfast with friends, and sleeping late.

109) Fred and Ann are both given free tickets to see a movie. Both decide to see the same movie. We know that 109) _____
A) the opportunity cost of seeing the movie is zero because the tickets were free.
B) both bear the same opportunity cost of seeing the movie because they are doing the same thing.
C) both bear an opportunity cost of seeing the movie because they could have done other things instead of seeing the movie.
D) it is not possible to calculate the opportunity cost of seeing the movie because the tickets were free.

110) 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 110) _____
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.

111) Today, Julie attended her 12:30 Economics class. If she hadn't gone to class, Julie would have gone 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 111) _____
A) lunch she gave up. B) income she gave up.
C) income, pleasure, and sleep she gave up. D) sleep she gave up.

112) Joe likes to sleep late in the mornings and play tennis in the afternoons. The opportunity cost of Joe attending his morning class for one hour is 112) _____
A) both the tennis given up and the sleep given up.
B) an hour of sleep given up.
C) an hour of tennis given up.
D) nothing because he is paying for his class.

113) John has two hours of free time this evening. He ranked his alternatives, first go to a concert, 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? 113) _____
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

114) You decide to take a vacation and the trip costs you $2,000. While you are on vacation, you do not go to work where you could have earned $750. In terms of dollars, the opportunity cost of the vacation is 114) _____
A) $2,750. B) $1,250 C) $750. D) $2,000.

115) The opportunity cost of attending college includes the cost of 115) _____
A) the tuition but not the job at which you would otherwise have worked.
B) tuition, books, and the lost wages for the hours spent studying.
C) the highest valued alternative to attending college plus the cost of tuition.
D) the highest valued alternative to attending college.

116) Misty has the option of purchasing one of three products: Brand A, Brand B, or Brand C. Each costs ten dollars. If she decides that Brand A meets her needs best, then the opportunity cost of this decision is 116) _____
A) twenty dollars.
B) Brand B plus Brand C.
C) Brand A.
D) Brand B or Brand C, depending on which is considered the highest–value alternative forgone.

117) Which of the following is NOT an example of an opportunity cost? 117) _____
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) 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.
C) Because David used all of his vacation time to paint his house, he was unable to visit the Caribbean last year.
D) By spending Thursday night studying for an economics exam, a student was unable to complete a homework assignment for calculus class.

118) From 8 to 11 p.m., Sam can either attend a basketball game, a hockey match or the symphony. 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 118) _____
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.

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

120) 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 _____. 120) _____
A) $2 million; $3 million
B) $2 million; $2 million
C) $50,000; $50,000
D) $50,000; $2 million

121) 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. In terms of dollars, the opportunity cost of attending summer school is 121) _____
A) $10,300. B) $3,300. C) $4,300. D) $6,000.

122) The term "opportunity cost" points out that 122) _____
A) there may be such a thing as a free lunch.
B) not all individuals will make the most of life's opportunities because some will fail to achieve their goals.
C) any decision regarding the use of a resource involves a costly choice.
D) executives do not always recognize opportunities for profit as quickly as they should.

123) When the government chooses to use resources to build a dam, these sources are no longer available to build a highway. This choice illustrates the concept of 123) _____
A) a fallacy of composition.
B) a market mechanism.
C) opportunity cost.
D) macroeconomics.

124) 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 of 124) _____
A) scarcity.
B) *ceteris paribus*.
C) productivity.
D) choosing at the margin.

125) Marginal benefit is the benefit 125) _____
A) that arises from the secondary effects of an activity.
B) that your activity provides to someone else.
C) of an activity that exceeds its cost.
D) that arises from an increase in an activity.

126) A benefit from an increase in activity is called the 126) _____
A) marginal benefit.
B) total benefit.
C) economic benefit.
D) opportunity benefit.

127) The marginal benefit is the 127) _____
A) loss of the highest–valued alternative.
B) additional gain from one more unit of an activity.
C) additional gain from one more unit of an activity minus the additional cost from one more unit of the activity.
D) additional cost from one more unit of an activity.

128) In terms of dollars, the marginal benefit of working five days a week instead of four days a week is 128) _____
A) the wages received for 4 days of work.
B) the wages received for the fifth day of work.
C) the wages received for 5 days of work.
D) None of the above answers is correct.

129) 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? 129) _____
A) $3.00 B) $18.00 C) $15.00 D) zero

130) 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 130) _____
A) is greater than the student's marginal cost.
B) is the benefit the student receives from studying all 3 hours.
C) is the benefit the student receives from studying the extra hour.
D) depends on the grade the student earns on the exam.

131) A student athlete is deciding whether to work out for an extra hour. Her marginal benefit from another hour of exercise 131) _____
A) depends on the cost of the workout.
B) is the benefit she gets from all the hours she's worked out all week.
C) is less than the marginal cost of the additional hour.
D) is the benefit she receives from exercising the additional hour.

132) 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 132) _____
A) 5 point increase in your grade minus the opportunity cost to you of spending the hour studying.
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.

133) Marginal cost is the cost 133) _____
A) that your activity imposes on someone else.
B) that arises from the secondary effects of an activity.
C) that arises from an increase in an activity.
D) of an activity that exceeds its benefit.

134) A cost due to an increase in activity is called 134) _____
A) the total cost.
B) a marginal cost.
C) a negative marginal benefit.
D) an incentive loss.

135) Marginal cost is the 135) _____
A) cost of an activity minus the benefits of the activity.
B) cost of all forgone alternatives.
C) cost of an increase in an activity.
D) total cost of an activity.

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

137) 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 137) _____
A) the additional revenue created by having an additional worker minus the cost of hiring the worker.
B) total amount paid to all *previously* hired workers.
C) the total amount paid to *all* the workers, both the new one and the previously hired workers.
D) total amount paid to *only* the new worker.

138) If the marginal cost of an activity exceeds the marginal benefit, then 138) _____
A) the activity will occur *because* the high marginal cost means it must be highly valued.
B) the person must concentrate on the activity's total benefits.
C) the forgone alternatives' costs must be increased.
D) an alternative action will be selected.

139) 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 139) _____
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 6 pm.
C) is the benefit the owner receives from staying open from 8 a.m. to 5 pm.
D) depends on the revenues the owner makes during the day.

140) Which of the following creates an incentive to increase the amount of an activity? 140) _____
A) a decrease in the marginal cost of the activity and an increase in the marginal benefit of the activity
B) an increase in the marginal cost of the activity and a decrease in the marginal benefit of the activity
C) constant marginal cost and constant marginal benefit of the activity
D) None of the above create an incentive to increase the amount of an activity.

141) Suppose that the government of New York state promises to decrease taxes to a firm if it decides to 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. 141) _____
A) an incentive; marginal cost exceed the marginal benefit
B) an incentive; marginal benefit exceed the marginal cost
C) a command; marginal cost exceed the marginal benefit
D) a command; marginal benefit exceed the marginal cost

142) Jed had an exam score of 50 percentage points. There is an extra credit assignment that Jed can 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 142) _____
A) wants a higher score.
B) 20 percentage points more than the 10 hours of his time.
C) 70 percentage points more than the 10 hours of his time.
D) 10 hours of his time more than the 20 percentage points.

143) From 8 P.M. to 10 P.M., Susan can attend a movie, study, or talk with friends. Suppose that Susan 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 143) _____
A) two hours of time.
B) studying.
C) talking with friends.
D) talking with friends *and* studying.

144) When the government hires people to serve in the army, these people are no longer available to do other work. This choice illustrates the concept of 144) _____
A) opportunity cost.
B) an incentive.
C) a social interest/private interest conflict.
D) marginal benefit.

145) When the government chooses to spend the tax dollars that it collects on homeland security, its choice _____. 145) _____

A) involves a tradeoff of other goods and services such as education for more homeland security
B) primarily affects who gets the goods and services produced.
C) illustrates that scarcity does not always exist
D) involves no tradeoff because the defense is necessary

146) Making a choice at the margin means _____. 146) _____

A) waiting until the last minute to make a choice
B) deciding to do a little bit more or a little bit less of an activity
C) letting someone else choose for you
D) making a choice by comparing the total benefit and the total cost

147) 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, _____. 147) _____

A) your marginal cost of studying economics for an hour must have exceeded its marginal benefit
B) the opportunity cost of studying economics must have risen.
C) your marginal benefit from studying economics an hour must have been greater than its marginal cost
D) the marginal cost of studying economics must have fallen

148) In economics, positive statements are about 148) _____

A) macroeconomics, not microeconomics. B) the way things are.
C) microeconomics, not macroeconomics. D) the way things ought to be.

149) A positive statement is 149) _____

A) about what is.
B) about what ought to be.
C) valid only in the context of a model with simple assumptions.
D) the result of a model's normative assumptions.

150) A positive statement is 150) _____

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

151) Which of the following are true regarding "positive" statements? 151) _____

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 and III. B) I, II and III. C) I and II. D) II and III.

152) Positive and normative statements differ in that 152) _____

A) positive statements can be tested, whereas normative statements cannot.
B) normative statements depict "what is" and positive statements depict "what ought to be."
C) normative statements can be tested, whereas positive statements cannot.
D) normative statements never use the word "should."

153) Positive economic statements 153) _____
A) prescribe what should be.
B) cannot be tested against the facts.
C) are related only to microeconomics.
D) can be tested against the facts.

154) Which of the following is a positive statement? 154) _____
A) An unemployment rate of 9 percent is a national disgrace.
B) When the national unemployment rate is 9 percent, the unemployment rate for inner-city youth is often close to 40 percent.
C) Unemployment and inflation are equally important problems.
D) Unemployment is a more important problem than inflation.

155) Which of the following is a positive statement? 155) _____
A) Because they decrease productivity, labor unions should be eliminated.
B) A 5 percent increase in income leads to a 3 percent increase in the consumption of orange juice.
C) The United States should fight inflation even if it raises unemployment.
D) What to do with Social Security is the most important economic issue today.

156) Which of the following is a positive statement? 156) _____
A) The distribution of income is fair.
B) People buy more of a good or service when its price falls.
C) Corporations should be more socially responsible.
D) The government ought to provide health care to everyone.

157) Which of the following is an example of a positive statement? 157) _____
A) The foreign sector should be more tightly controlled.
B) Government should not redistribute income.
C) Households are the primary source of saving.
D) Business firms ought to contribute more to charities.

158) Which of the following is an example of a positive statement? 158) _____
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.

159) Which of the following is a positive statement? 159) _____
A) Taxes should be lower because then people get to keep more of what they earn.
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) A 10 percent increase in income leads to a 4 percent increase in the consumption of beef.

160) Which of the following is a positive statement? 160) _____
A) A minimum wage of $7.50 per hour is a shame for a rich country like the United States.
B) Our planet is warming because of an increased carbon dioxide buildup in the atmosphere.
C) Both these statements are positive.
D) Neither of these statements is positive.

161) Which of the following is a positive statement? 161) _____
A) My economics class should last for two terms because it is my favorite class.
B) An increase in tuition means fewer students will apply to college.
C) The best level of taxation is zero percent because then people get to keep everything they earn.
D) The government must lower the price of a pizza so that more students can afford to buy it.

162) Which of the following is a positive statement? 162) _____
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.

163) When Al makes the statement, "The cost of living has increased 10 percent over the past 10 years," he is 163) _____
A) making a normative statement.
B) facing the standard of living tradeoff.
C) making a positive statement.
D) testing an economic model.

164) Which of the following is a positive statement? 164) _____
A) Increased prison sentences are the best way to reduce the crime rate.
B) State lotteries are good methods to use for raising revenues.
C) An increase in gas prices leads people to car pool more.
D) Inflation is a more serious problem than is deflation.

165) The statement "Managers with a college education earn $18 an hour while ski instructors who did not complete college earn $10" is 165) _____
A) a normative statement.
B) an ethical statement.
C) a positive statement.
D) a political statement.

166) The statement "An increase in the price of gasoline will lead to a decrease in the amount purchased" is 166) _____
A) a positive statement.
B) a normative statement.
C) a scientific statement.
D) a political statement.

167) The statement "The unemployment rate for teens is higher than that for adults" is 167) _____
A) a political statement.
B) an ethical statement.
C) a normative statement.
D) a positive statement.

168) Which of the following is <u>NOT</u> a normative statement? 168) _____
A) The government ought to provide health care to everyone.
B) People buy more of a good or service when its price falls.
C) The distribution of income is fair.
D) Corporations should be more socially responsible.

169) A normative statement concerns 169) _____
A) what is provable.
B) what is incorrect.
C) what is correct.
D) a value judgment.

170) Normative economic statements 170) _____
A) describe what ought to be.
B) describe the process of economic policy–making.
C) deal with economic hypotheses that are not well–established laws.
D) describe what is rather than what ought to be.

171) The statement that "peach ice cream is better than chocolate ice cream" 171) _____
A) is a normative statement.
B) can be tested using the scientific approach.
C) provides a basis for predicting which type of ice cream will exhibit the most sales.
D) is a positive statement.

172) The statement "Unemployment should be below 6 percent" is 172) _____
A) a positive statement.
B) an assumption.
C) a prediction.
D) a normative statement.

173) Statements about what ought to be are called 173) _____
A) implications.
B) normative statements.
C) assumptions.
D) positive statements.

174) Normative statements are statements about 174) _____
A) what ought to be.
B) prices.
C) what is.
D) quantities.

175) A normative statement is 175) _____
A) one that does not use marginal concepts.
B) about what is.
C) always true.
D) about what ought to be.

176) In economics, normative statements are about 176) _____
A) marginal benefits, not marginal costs.
B) marginal costs, not marginal benefits.
C) the way things ought to be.
D) the way things are.

177) Which of the following is a normative statement? 177) _____
A) Popcorn and candy are sold in movie theaters.
B) You should eat less candy.
C) The price of candy bars is $1.25 each.
D) Candy bars are more expensive than newspapers.

178) Which of the following is a normative statement? 178) _____
A) Forty percent of the public believes that the unemployment rate is too high.
B) The unemployment rate rose last month.
C) The unemployment rate is too high.
D) None of the above are normative statements.

179) Which of the following is a normative statement? 179) _____
A) The main reason why the United States has a trade deficit with China is because China's trade practices are unfair.
B) The United States has a comparative advantage compared to the European Union in the production of wheat.
C) Both these statements are normative.
D) Neither of these statements is normative.

180) "Government should act to reduce poverty levels." 180) _____
A) This statement is an example of the *post hoc* fallacy.
B) This statement is an example of the fallacy of composition.
C) This statement is a positive statement.
D) This statement is a normative statement.

181) When Susan makes the statement, "The government should spend less money to take care of national parks," she is 181) _____
A) not dealing with scarcity.
B) testing an economic model.
C) making a normative statement.
D) making a positive statement.

182) "The rich should pay higher income tax rates than the poor" is an example of a 182) _____
A) descriptive statement.
B) normative statement.
C) theoretical statement.
D) positive statement.

183) Which of the following is a normative statement? 183) _____
A) Studying more hours leads to an increase in your GPA.
B) States should require all motorcycle riders to wear helmets to reduce the number of riders killed.
C) Taking extra vitamin C prevents catching a cold.
D) An increase in tax rates means people work fewer hours.

184) Which of the following is a normative statement? 184) _____
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.

185) Which of the following is a normative statement? 185) _____
A) The government's cuts in welfare spending impose an unfair hardship on the poor.
B) 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.
C) The current butter surplus is the result of federal policies.
D) Next year's inflation rate will be under 4 percent.

186) Economic models 186) _____
A) always use graphs.
B) are essentially different from those used in other sciences.
C) include all relevant facts.
D) simplify reality.

187) A good economic model 187) _____
A) includes only those features of the world that are needed for the purpose at hand.
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) should not include more than two variables.

188) An economic model is 188) _____
A) a collection of facts that describe the real world.
B) a statement that describes how the world should be.
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.

189) A normative statement is 189) _____
A) about what ought to be.
B) one that is based on an economic experiment.
C) about what is.
D) always true.

190) Which of the following is a positive statement? 190) _____
A) My favorite dinner is pizza and soda.
B) An increase in the price of pizza will lead fewer students to buy pizza.
C) The government should spend more on education.
D) The government must provide health insurance so that the poor can obtain decent medical treatment.

191) An economic model includes 191) _____
A) only normative statements.
B) all known details in order to increase its accuracy.
C) only details considered essential.
D) no use of marginal concepts.

192) The statement that _____ is a positive statement. 192) _____
A) too many people in the United States have no health care insurance
B) the price of sugar in the United States is higher than the price in Australia
C) more students should study economics
D) the price of gasoline is too high

193) Ben Bernanke, Chairman of the Federal Reserve, must choose whether tomorrow he meets with the Secretary of the Treasury or with the Congress regarding the financial crisis. This choice reflects the 193) _____
A) concept of entrepreneurship.
B) use of capital.
C) fact that Bernanke faces scarcity.
D) fact that Bernanke responds to incentives

194) When the president of the Bank of America addresses Congress regarding lending standards in that industry, he is discussing 194) _____
A) incentives.
B) a macroeconomic topic.
C) the big tradeoff.
D) a microeconomic topic.

195) When Ben Bernanke, Chairman of the Federal Reserve, addresses Congress regarding the United States role in the world economy, he is discussing 195) _____
A) a macroeconomic topic. B) a microeconomic topic.
C) incentives. D) scarcity.

196) Dell Computers decides to produce PCs and sell them directly over the Internet and via Best Buy. This is an example of 196) _____
A) scarcity. B) a microeconomic decision.
C) a macroeconomic decision. D) incentives.

197) Consider the following events: 197) _____
i. Samsung hires associates to market their HDTV sets to Best Buy.
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) i, ii, iii, and v D) iv only

198) Panasonic sends its HDTV salespeople to training sessions. This is an example of 198) _____
A) entrepreneurship.
B) a firm investing in workers' human capital
C) scarcity.
D) a macroeconomic decision.

199) "When OPEC increases the supply of oil to the market, the price of gasoline falls." This is an example of 199) _____
A) a normative statement.
B) a macroeconomic statement.
C) the failure of opportunity cost to determine prices.
D) a positive statement.

200) "As part of the financial crisis bailout plan in 2009, the Federal Reserve bought stakes in banks. This policy will result in an increase in the inflation rate." This is an example of 200) _____
A) a microeconomic statement. B) an economic model.
C) a normative statement. D) a positive statement.

201) "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 201) _____
A) the Federal Reserve taking actions that are not at the margin.
B) opportunity costs.
C) a normative statement.
D) a positive statement.

202) "OPEC should supply more oil so that the world's economies can grow more rapidly." This is an example of 202) _____
A) a positive statement. B) a normative statement.
C) a decision at the margin. D) OPEC overcoming scarcity

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

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

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

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

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

207) What is the difference between scarcity and poverty?

208) Define economics and describe its branches of study.

209) What is the difference between microeconomics and macroeconomics?

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

211) 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 of the performance of the whole national economy."

212) 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.

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

214) 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.

215) What is a tradeoff? Give an example.

216) What is opportunity cost?

217) 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.

218) 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?

219) Define marginal cost and marginal benefit.

220) 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.

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

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

223) "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.

224) 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.

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

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

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

228) 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.

229) 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?

230) 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?

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

231) Scarcity applies to both the rich and the poor. 231) _____

232) Scarcity affects only those who are in need. 232) _____

233) Microeconomics is the study of topics such as national production and unemployment. 233) _____

234) Macroeconomics is the study of aggregate variables such as national production and unemployment. 234) _____

235) The tools, instruments, machines, and buildings that people use to produce goods and services are called human capital. 235) _____

236) Most income in the United States is earned by business owners as profit. 236) _____

237) The United States produces more services than goods. 237) _____

238) 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. 238) _____

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

239) 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.

240) 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 her free time for no less than $750 per week. However, if she goes to summer school, she'll have to spend 40 hours a week 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's 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 cost and marginal benefit.

241) 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?

242) 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 price that the manager charges is too high. But how much should you pay? Use the economic way of thinking to answer this 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.

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

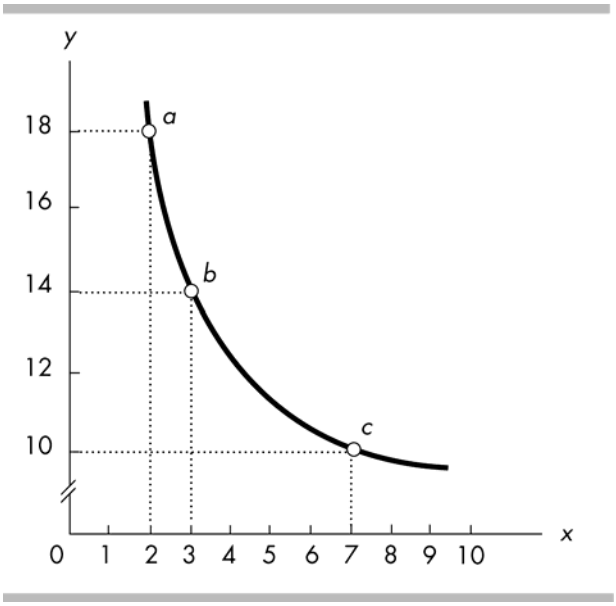
243) The horizontal axis in a graph 243) _____
A) is named the x–axis.
B) measures time in a scatter diagram.
C) is named the y–axis.
D) measures the quality of a variable.

244) The vertical axis in a graph 244) _____
A) is not used in a scatter diagram.
B) is named the x–axis.
C) is named the y–axis.
D) has no origin.

245) The value of the y–coordinate of a point in a graph is the length of a line from the point to the 245) _____
A) origin. B) x–axis. C) y–axis. D) scalar.

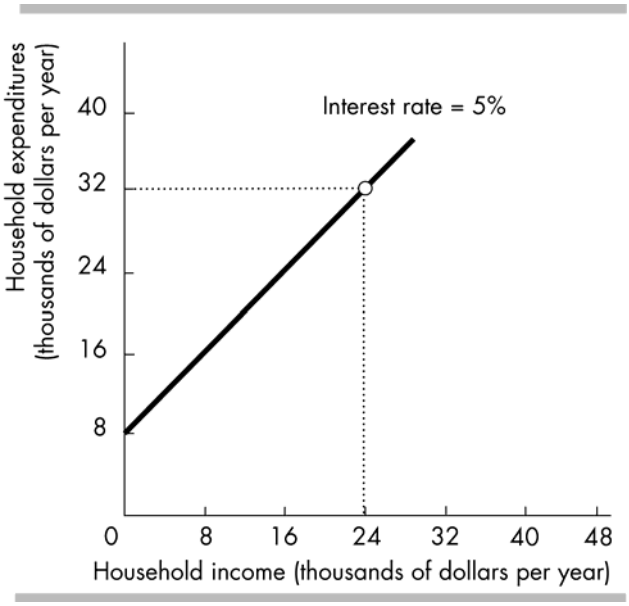
246) The value of the x–coordinate of a point in a graph is the length of a line from the point to the 246) _____
A) scalar. B) y–axis. C) origin. D) x–axis.

247) On the horizontal axis of a graph, generally 247) _____
A) values increase from left to right.
B) values increase from right to left.
C) values can be positive and/or negative.
D) Both answers A and C are correct.

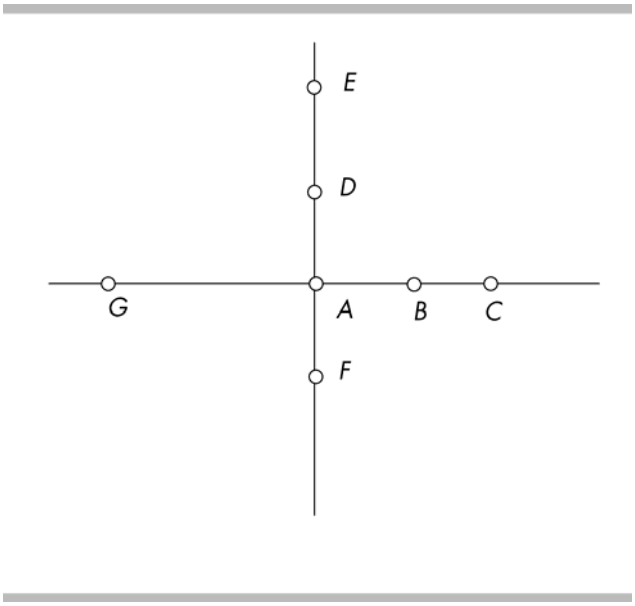


248) In the above figure, the x–coordinate of point b is 248) _____
A) 3. B) 14. C) 1. D) 2.

249) In the above figure, the y–coordinate of point b is 249) _____
A) 1. B) 3. C) 2. D) 14.



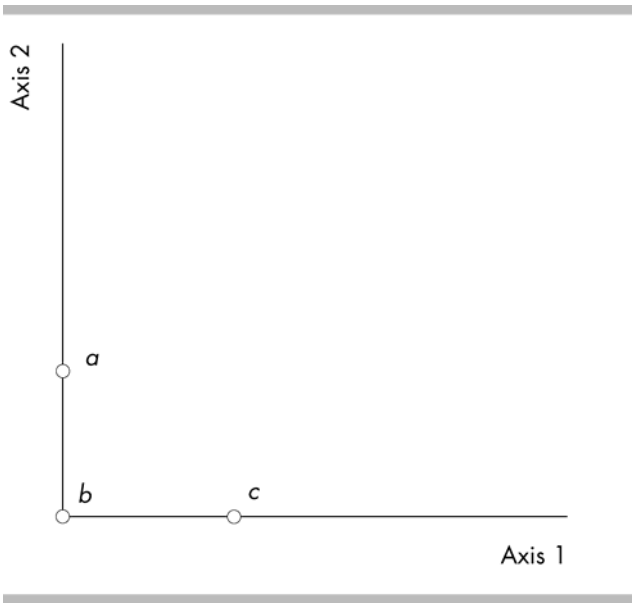
250) In the above figure, when income is zero, household expenditures equal 250) _____
A) 0. B) $4000. C) $1000. D) $8000.



251) In the figure above, the value on the x-axis increases as we move from 251) _____
A) point G to point A. B) point C to point A.
C) point E to point A. D) point F to point A.

252) In the figure above, the value on the y-axis decreases as we move from 252) _____
A) point E to point A. B) point F to point A.
C) point C to point A. D) point G to point A.

253) In the figure above, point B is _____. 253) _____
A) on the x-axis B) on the y-axis C) a coordinate D) at the origin



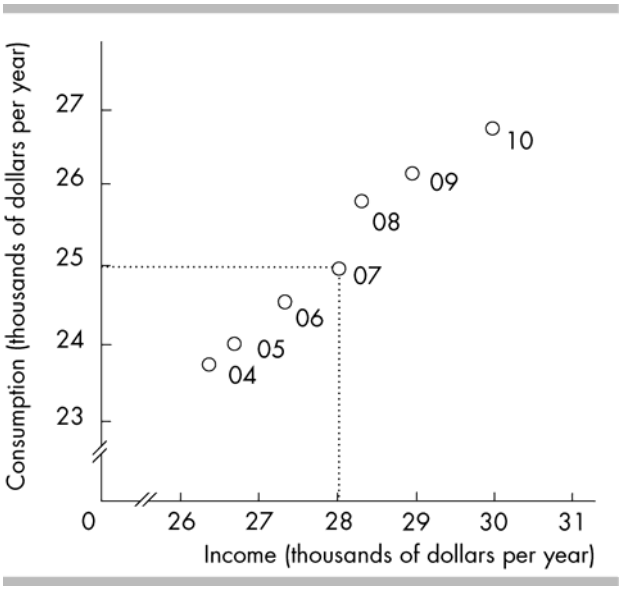
254) Using the above figure, the origin is at which point? 254) _____
A) Point *a*
B) Point *b*
C) Point *c*
D) None of the points in the figure is the origin.

255) Using the above figure, which of the following is true? 255) _____
A) Axis 1 is typically called the *y*–axis.
B) Axis 2 is typically called the *x*–axis.
C) Axis 1 is also known as the origin.
D) Point *b* is known as the origin.

256) A scatter diagram shows the 256) _____
A) evolution of a variable.
B) level of one variable over time.
C) change in one variable over time.
D) relationship between two variables.

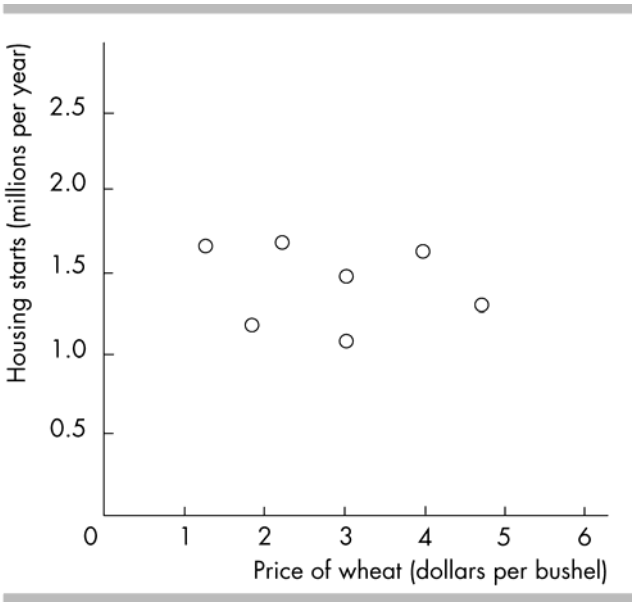
257) A scatter diagram will be most useful 257) _____
A) in resolving a dispute over two normative assertions.
B) in discerning a possible relationship between height and weight for individuals.
C) in predicting next year's rate of unemployment.
D) All of the above are correct.

258) You notice that when interest rates increases, new residential housing prices tend to decrease. This observation indicates that 258) _____
A) a scatter diagram between interest rates and housing prices will show a negative relationship.
B) higher interest rates must cause low housing prices.
C) a scatter diagram between interest rates and housing prices will show a direct relationship.
D) there must be false causality between interest rates and housing prices.



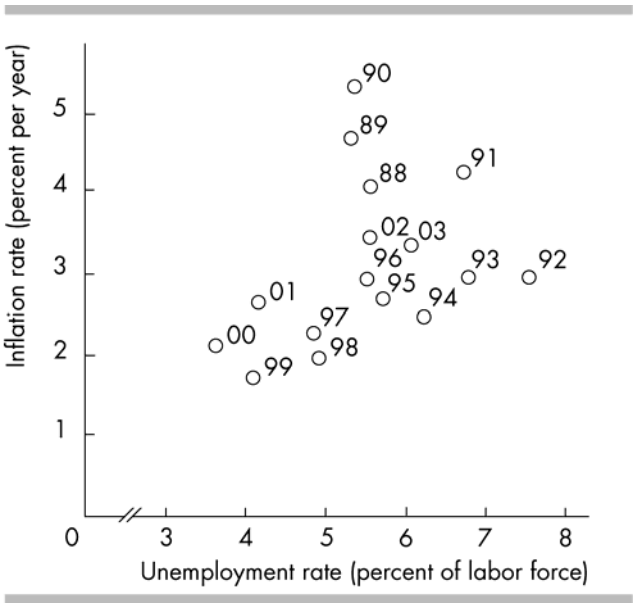
259) The above figure plots income and consumption in a nation. In 2007 259) _____

A) consumption was equal to $25,000 and income was equal to $25,000.
B) consumption was equal to $27,000 and income was equal to $31,000.
C) consumption was equal to $28,000 and income was equal to $25,000.
D) consumption was equal to $25,000 and income was equal to $28,000.



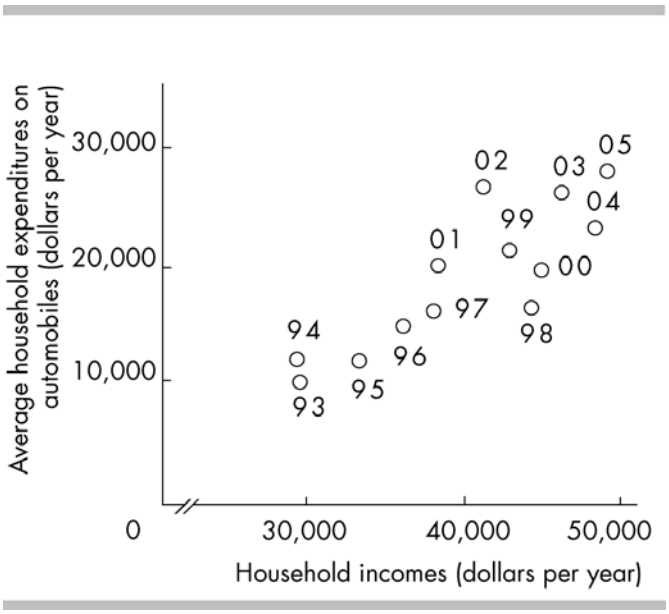
260) The above figure graphs the price of a bushel of wheat and housing starts. The graph shows the variables are 260) _____

A) strongly positively related.
B) related via an indirect relationship.
C) not related.
D) strongly negatively related.



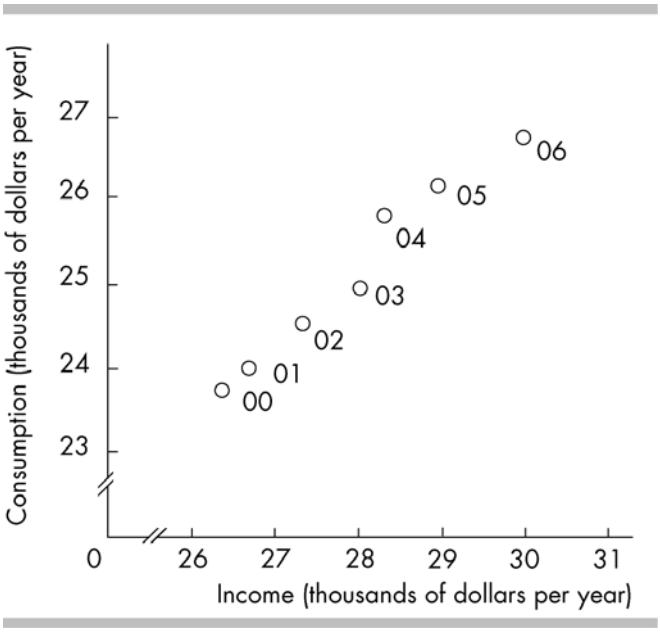
261) The figure above shows that in 1996, unemployment was equal to about _____ and the inflation rate was equal to about _____. 261) _____

A) 5.5 percent; 3.0 percent
B) 7.0 percent; 3.0 percent
C) 3.0 percent; 5.5 percent
D) 6.0 percent; 4.0 percent



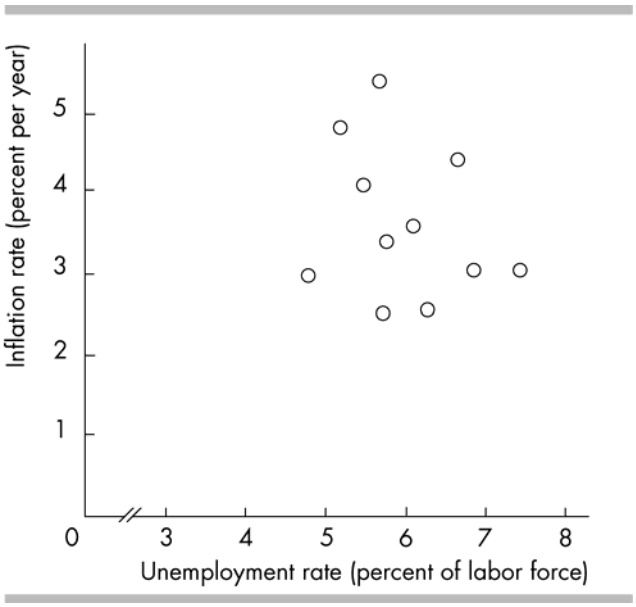
262) The above figure reveals 262) _____

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.



263) In the above figure, the axis breaks are used 263) _____

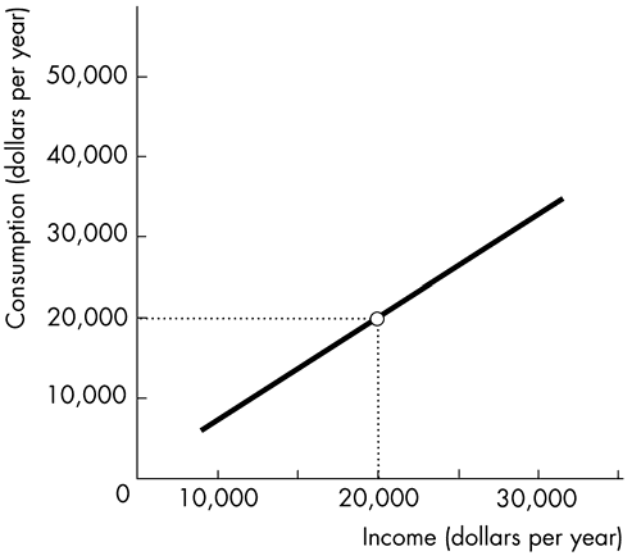
A) to indicate that there are not enough data to be included in the graph.
B) to show that there are no data available for the omitted ranges.
C) to create a misleading graph.
D) to indicate that there are jumps from the origin, 0, to the first values recorded along the axes.



264) In the above figure, the axis break in the x-axis 264) _____
A) implies that for the years covered in the figure, the inflation rate was always greater than 1 percent.
B) misleadingly shows that inflation has changed very little even though the unemployment rate has increased a great deal.
C) reflects the fact that for the years covered in the figure, the unemployment rate was never less than 3 percent.
D) shows that there is no relationship between inflation and unemployment.

265) On a graph, high correlation between the variable measured along the x-axis and the variable measured along the y-axis 265) _____
A) means that changes in the variable measured along the x-axis must cause changes in the variable measured along the y-axis.
B) does NOT mean that a change in the variable measured along the x-axis must cause a change in the variable measured along the y-axis.
C) means that changes in the variable measured along the y-axis must cause changes in the variable measured along the x-axis.
D) means that changes in either variable must cause changes in the other variable.

266) You notice that when the inflation rate increases, the interest rate tends to increase. This observation indicates that 266) _____
A) the variables have an inverse 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.



267) In the figure above, when income equals $20,000, what does consumption equal? 267) _____
A) $10,000 B) $20,000
C) $0 D) impossible to tell

268) If two variables are positively related, then 268) _____
A) they move in opposite directions. B) they move in the same direction.
C) their graph will have a negative slope. D) they are independent of each other.

269) If two variables both increase at the same time or decrease at the same time, they are 269) _____
A) conversely related. B) positively related.
C) negatively related. D) unrelated to each other.

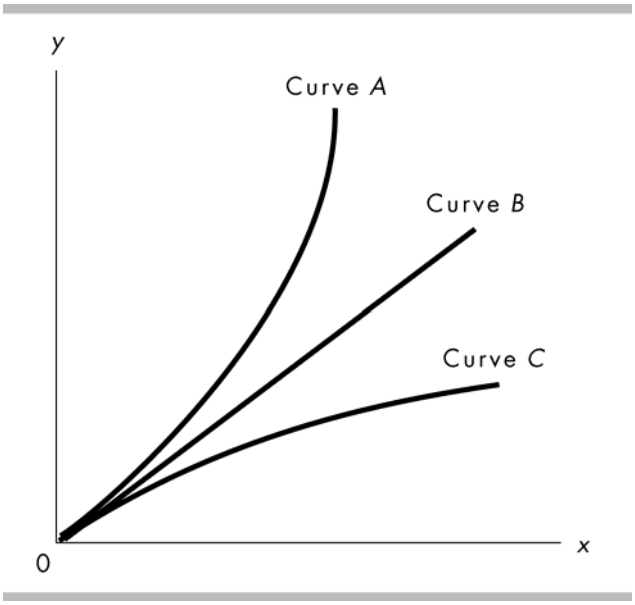
270) If there is a direct relationship between two variables, 270) _____
A) the slope of the line (or the slope of a tangent line to the curve) will be negative.
B) the graph of the relationship will be upward-sloping.
C) the graph of the relationship will be downward-sloping.
D) Both answers A and C are correct.

271) 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 271) _____
A) have a slope of zero. B) be negatively sloped.
C) be a vertical line. D) be none of the above.

272) A positive relationship exists between two variables if 272) _____
A) one variable has "positively" no effect on the other variable.
B) a reduction in one variable is associated with an increase in the other variable.
C) both variables are inflation-distorted.
D) a reduction in one variable is associated with a decrease in the other variable.

273) If the slope of a line that graphs the relationship between variable x and variable y is positive, then we know that 273) _____
A) when the value of variable x increases, then the value of variable y decreases.
B) when the value of variable x decreases, then the value of variable y decreases.
C) the two variables have an inverse relationship.
D) the two variables are unrelated.

274) 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? 274) _____
A) negative relationship
B) no relationship
C) maximum relationship
D) positive relationship



275) In the above figure, which curve shows a positive relationship between x and y? 275) _____
A) Only curve *A*.
B) Only curve *B*.
C) Only curve *C*.
D) All the curves show a positive relationship.

276) In the above figure, which curve shows a negative relationship between x and y? 276) _____
A) Only curve *A*.
B) Only curve *B*.
C) Only curve *C*.
D) None of the curves show a negative relationship.

277) A scatter diagram with the price of vacations to Mexico on the vertical axis and the price of 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 277) _____
A) positive relationship, also called a direct relationship.
B) negative relationship, also called a direct relationship.
C) positive relationship, also called an inverse relationship.
D) negative relationship, also called an inverse relationship.

278) The figure above shows _____ relationship between the two variables. 278) _____
A) a positive B) an inverse C) a negative D) no

279) "As you devote more hours to studying, your GPA increases." A graph of this relationship would show 279) _____
A) a positive relationship.
B) a direct relationship.
C) an inverse relationship.
D) Both answers A and B are correct.

280) "As interest rates rise, people save more money." A graph displaying this relationship would show 280) _____
A) a cross-section graph.
B) a positive relationship.
C) an inverse relationship.
D) a positive then a negative relationship.

281) "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 281) _____
A) a negatively-sloped curve that becomes less steep.
B) an upward-sloping curve that becomes less steep.
C) a positive linear relationship.
D) a negative linear relationship.

282) 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 282) _____
A) an upward–sloping curve that becomes more steep.
B) an upward–sloping curve that becomes less steep.
C) a positive linear relationship.
D) a negative linear relationship.

283) 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 283) _____
A) a negatively–sloped line that becomes flatter.
B) a negatively–sloped line that becomes steeper.
C) a positively–sloped line that becomes flatter.
D) a positively–sloped line that becomes steeper.

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

284) 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 284) _____
A) directly with their total household income.
B) inversely with their total household income.
C) negatively with their income.
D) independently of their total household income.

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

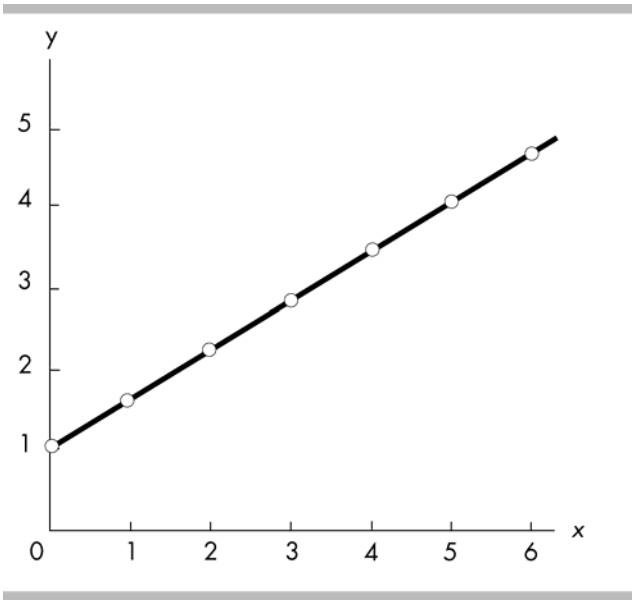
285) In the above table, when x increases from 4 units to 6 units, y changes by _____ units. 285) _____
A) 2 B) 6 C) –2 D) –6

286) The above table indicates that variables x and y are 286) _____
A) positively related. B) not related.
C) negatively related. D) inversely related.

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

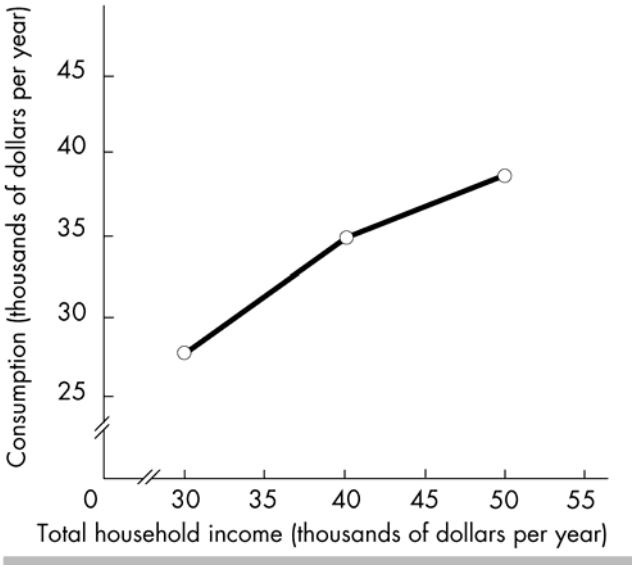
287) Given the information in the above table, the relationship between x and y is 287) _____

A) negative and linear.
B) positive, and the curve becomes steeper as x increases.
C) positive, and the curve becomes flatter as x increases.
D) positive and linear.

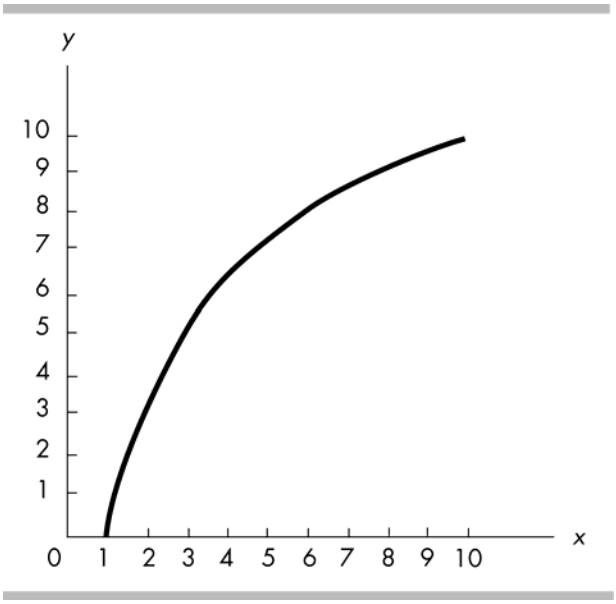


288) In the above figure, the relationship between x and y is 288) _____

A) positive, and the curve becomes steeper as x increases.
B) positive, and the curve becomes flatter as x increases.
C) negative and linear.
D) positive and linear.



289) The above figure shows the relationship between the Joneses' total consumption and total household income. The figure illustrates that the Joneses' total consumption varies 289) _____
A) inversely with their total household income.
B) independently of their total household income.
C) negatively with their income.
D) directly with their total household income.



290) The relationship depicted in the above figure is 290) _____
A) a positive becoming less steep relationship.
B) a negative linear relationship.
C) a positive becoming steeper relationship.
D) a positive linear relationship.

291) Whenever one variable increases, another variable decreases. The two variables are 291) _____
A) definitely related through a third variable.
B) negatively related.
C) unrelated to each other.
D) positively related.

292) If variable x always increases when variable y decreases, x and y are said to be 292) _____
A) trend related.
B) unrelated.
C) positively related.
D) negatively related.

293) 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 293) _____
A) an increase in the value of variable y.
B) a decrease in the value of variable y.
C) variable y reaching its maximum value.
D) no change in the value of variable y.

294) If there is an inverse relationship between two variables, the graph of this relationship 294) _____
A) might be horizontal.
B) will be downward-sloping.
C) will be upward-sloping.
D) will be a horizontal line.

295) A negative relationship exists between the variable measured along the y-axis and the variable measured along the x-axis if 295) _____
A) a reduction in the variable measured along the x-axis is associated with a reduction in the variable measured along the y-axis.
B) the variable measured along the x-axis and the variable measured along the y-axis move in the opposite 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) the variable measured along the x-axis and the variable measured along the y-axis move in the same direction.

296) Along a curve, when one variable increases, the other variable decreases. The curve showing this relationship 296) _____
A) might be horizontal.
B) has a negative slope.
C) has a positive slope.
D) has an increasing then a decreasing slope.

297) "As the price of gasoline increases, fewer people buy cars that are gas guzzlers." A graph showing this relationship would have 297) _____
A) a negative slope.
B) a direct relationship.
C) a horizontal line.
D) a positive relationship.

298) A graph shows that as fees to use ATM machines increase, people use them less frequently. The graph of this relationship would show 298) _____
A) an inverse relationship.
B) a negative relationship.
C) a direct relationship.
D) Both answers A and B are correct.

299) As the number of days without rain increases, the amount of wheat per acre grown declines. A graph showing this relationship would have a curve 299) _____
A) showing a positive relationship.
B) that is a horizontal line.
C) that is a vertical line.
D) None of the above answers are correct.

300) 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 300) _____
A) would be positively and then negatively–sloped.
B) would be horizontal.
C) would be positively sloped.
D) would be negatively sloped.

301) 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 301) _____
A) upward and may be linear or nonlinear.
B) downward and be linear.
C) downward and may be linear or nonlinear.
D) upward and be linear.

302) 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 302) _____
A) a maximum relationship.
B) a linear relationship.
C) a direct relationship.
D) an inverse relationship.

303) If the quantity of wood purchased decreases when the price of wood rises, a graph representing these variables would have 303) _____
A) the slope on the vertical axis.
B) a negative slope.
C) a positive slope.
D) time on the vertical axis.

304) 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 304) _____
A) negative relationship, also called an inverse relationship.
B) positive relationship, also called a direct relationship.
C) positive relationship, also called an inverse relationship.
D) negative relationship, also called a direct relationship.

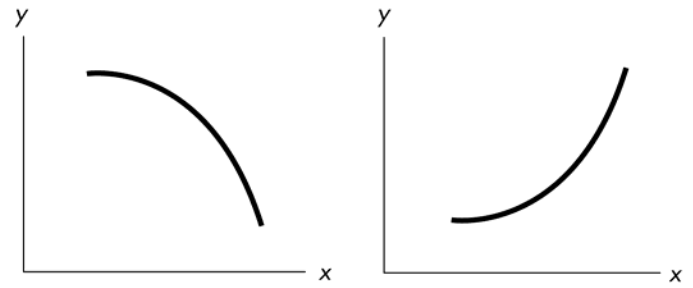


Figure A

Figure B

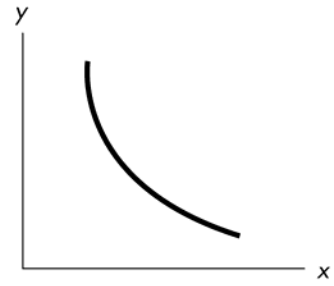


Figure C

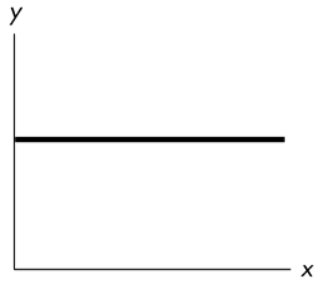


Figure D

305) 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? 305) _____

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

306) 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? 306) _____

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

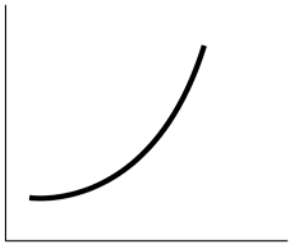


Figure A

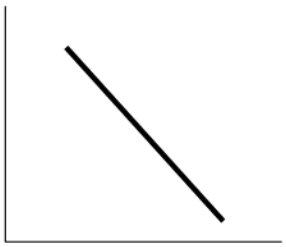


Figure B

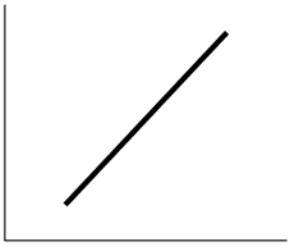


Figure C

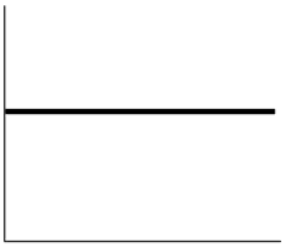
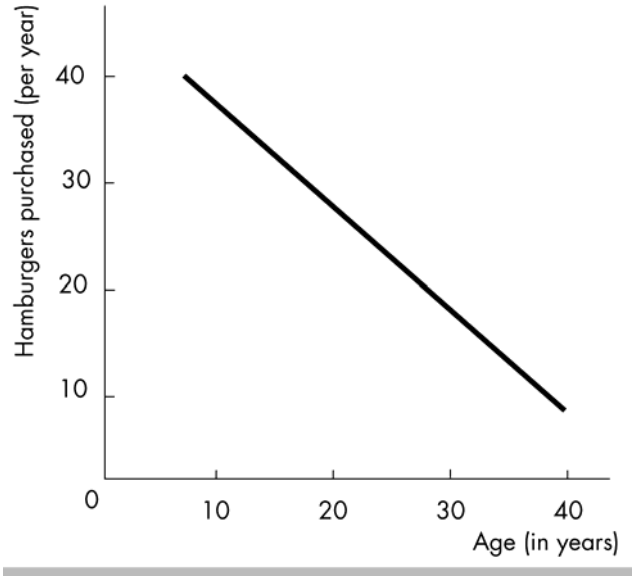


Figure D

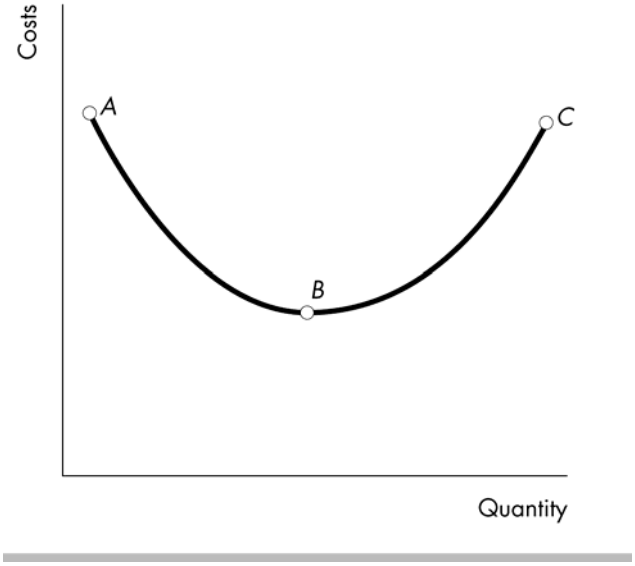
307) In the above figure, a negative relationship is demonstrated in which of the graphs? 307) _____

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



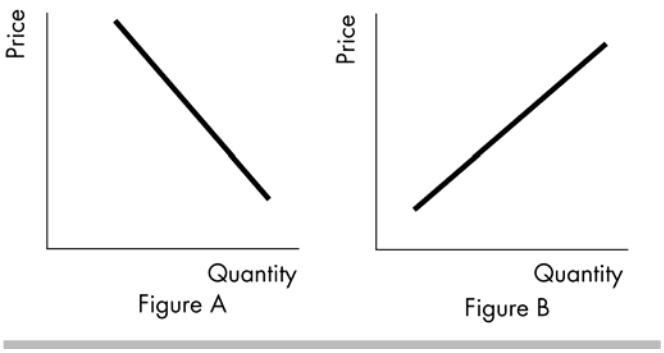
308) The above figure depicts a 308) _____

A) negative non–linear relationship between age and the number of hamburgers purchased per year.
B) positive non–linear relationship between age and the number of hamburgers purchased per year.
C) positive linear relationship between age and the number of hamburgers purchased per year.
D) negative linear relationship between age and the number of hamburgers purchased per year.



309) In the above figure, the relationship between costs and quantity is negative 309) _____

A) between point *A* and point *B*.
B) along the entire curve.
C) no where along the curve.
D) between point *B* and point *C*.

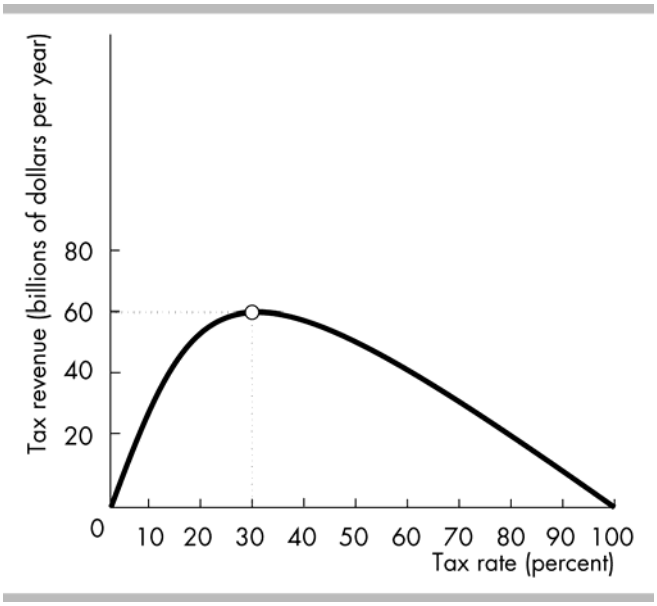


310) In the above, a positive relationship between price and quantity is shown in 310) _____
A) Figure A
B) Figure B
C) neither Figure A nor Figure B
D) both Figure A and Figure B

311) In the above figure, a negative relationship between price and quantity is shown in 311) _____
A) Figure A.
B) Figure B.
C) Neither Figure A nor Figure B.
D) Both Figure A and Figure B.

312) If a graph shows a negative relationship between two variables which then becomes a positive relationship, this curve would 312) _____
A) have a minimum point.
B) always be a downward-sloping line.
C) have a maximum point.
D) always be an upward-sloping line.

313) As a firm expands its output, cost per unit of output (average cost) decreases and then increases. Average cost and output have 313) _____
A) a relationship with a maximum.
B) no relationship.
C) a relationship with a minimum.
D) a linear positive relationship.

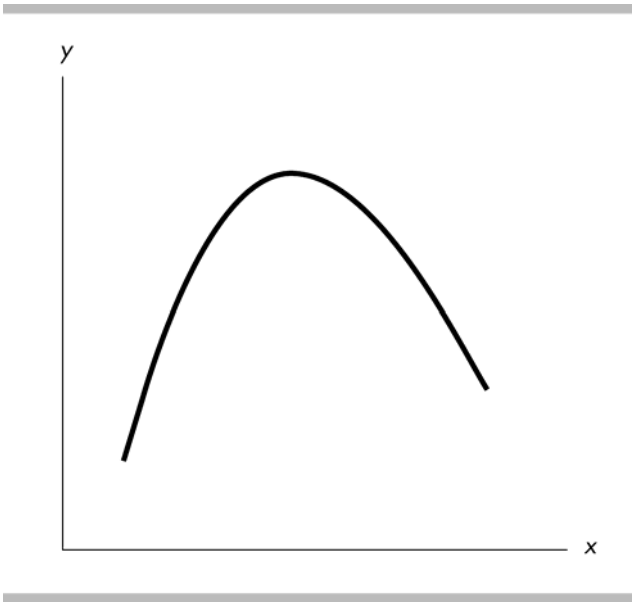


314) In the above figure, the relationship between the tax rate and tax revenue is positive and becoming less steep between tax rates of 314) _____
A) 0 percent and 100 percent.
B) 0 percent and 30 percent.
C) 30 percent and 100 percent.
D) None of the above answers are correct.

315) In the above figure, if the tax rate is increased from 20 percent to 30 percent, tax revenue 315) _____
A) increases.
B) may increase or decrease.
C) is constant.
D) decreases.

316) In the above figure, tax revenue is at a maximum when the tax rate is 316) _____
A) 100 percent. B) 0 percent. C) 30 percent. D) 50 percent.

317) As a curve approaches a maximum point, the slope will 317) _____
A) be positive, then negative after the maximum point.
B) remain constant on either side of the maximum point.
C) be negative, then positive after the maximum point.
D) increase before and after the maximum point.



318) In the figure above, the relationship between the x variable and the y variable 318) _____
A) is positive.
B) starts by being positive and then becomes negative.
C) starts by being negative and then becomes positive.
D) is negative.

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

319) 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 319) _____
A) a linear relationship.
B) a horizontal line.
C) no relationship.
D) first a negative and then a positive relationship.

320) If a curve rises and then falls, it shows a 320) _____
A) constant slope relationship.
B) minimum.
C) linear relationship.
D) maximum.

321) If a curve falls and then rises, it shows 321) _____
A) a constant slope relationship.
B) a minimum.
C) a maximum.
D) a linear relationship.

322) When y changes, x stays the same. The line depicting this relationship would be 322) _____
A) linear with a positive slope. B) linear with a negative slope.
C) vertical. D) horizontal.

323) A graph measures y on the vertical axis and x on the horizontal. The curve on the graph is a horizontal line. From this fact we know that 323) _____
A) the ratio of x to y is constant.
B) the value of y does not depend on the value of x.
C) the value of x never changes.
D) the slope of the line is not defined because y never changes.

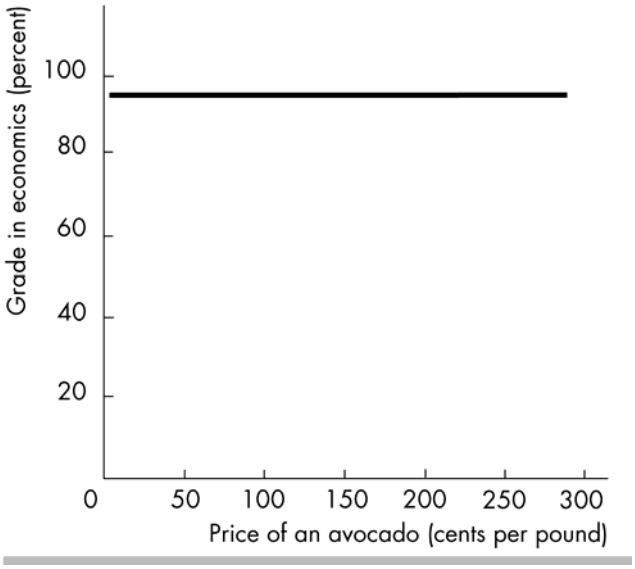
324) A graph measures y on the vertical axis and x on the horizontal. The curve on the graph is a vertical line. From this fact we know that 324) _____
A) the ratio of y to x is constant.
B) the value of y is constant.
C) the value of x does not change when the value of y changes.
D) the ratio of x to y is constant.

325) The graph of two variables, x and y, is a horizontal line. This result indicates that x and y are 325) _____
A) negatively related. B) positively related.
C) not related. D) falsely related.

326) A diagram shows the quantity of tomatoes on the horizontal axis and the quantity of coffee on the vertical axis. The quantity of tomatoes remains constant as the quantity of coffee increases. The graph of these data is 326) _____
A) a vertical line. B) a positively sloped line.
C) a horizontal line. D) a negatively sloped line

327) 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 327) _____
A) a curve with a maximum. B) a vertical line.
C) a positively–sloped line. D) a horizontal line.

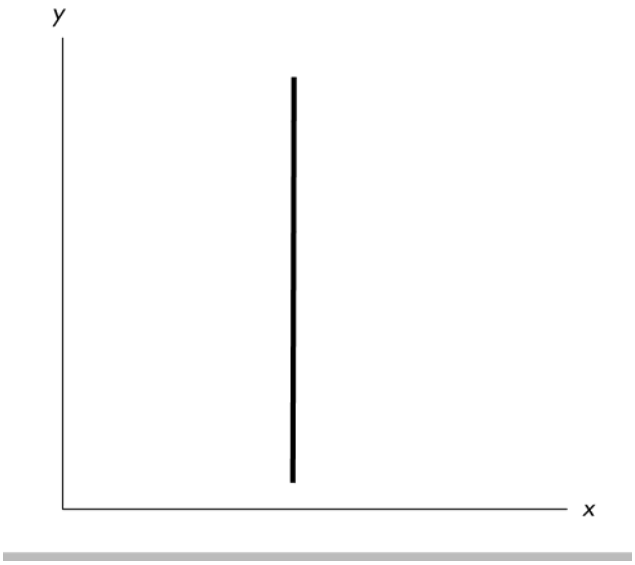
328) If two variables are unrelated, a scatter diagram of those variables will 328) _____
A) be a vertical line. B) be either a vertical or horizontal line.
C) have a constant positive slope. D) be a horizontal line.



329) Which of the following correctly describes the above figure? 329) _____

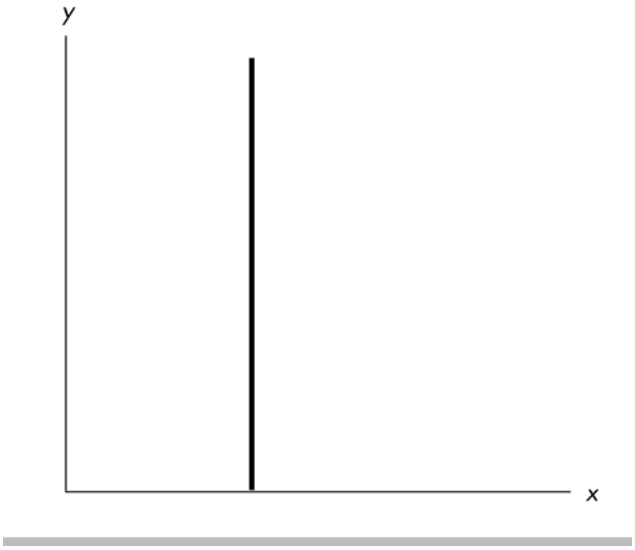
I. There is no relationship between the price of an avocado and a student's grade in economics.
II. The value of variable measured on the y–axis is constant as the variable measured on the x–axis increases.
III. As a student's grade in economics increases, the price of an avocado increases.

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



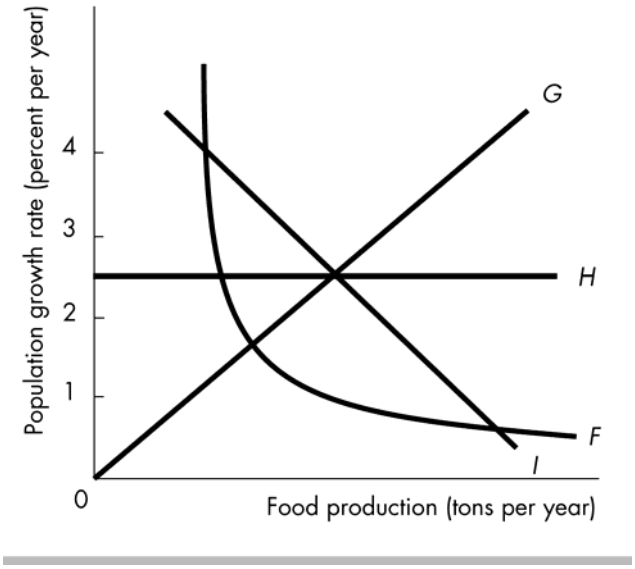
330) In the above, as the y variable increases 330) _____

A) the x variable is constant.
B) the x variable at first increases but then decreases.
C) the x variable decreases.
D) the x variable increases.



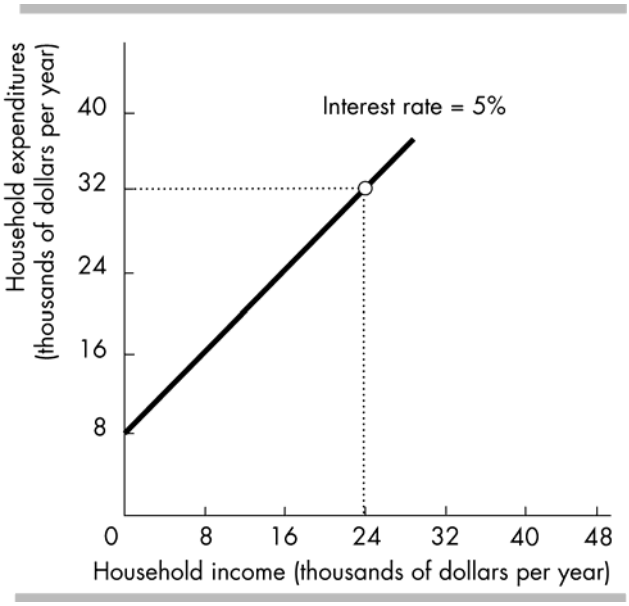
331) Which of the following correctly describes the above figure? 331) _____

A) There is a negative relationship between x and y.
B) There is a positive relationship between x and y.
C) There is no relationship between x and y.
D) None of the above answers are correct.



332) In the above figure, which curve indicates that the level of food production does not affect the population growth rate? 332) _____

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

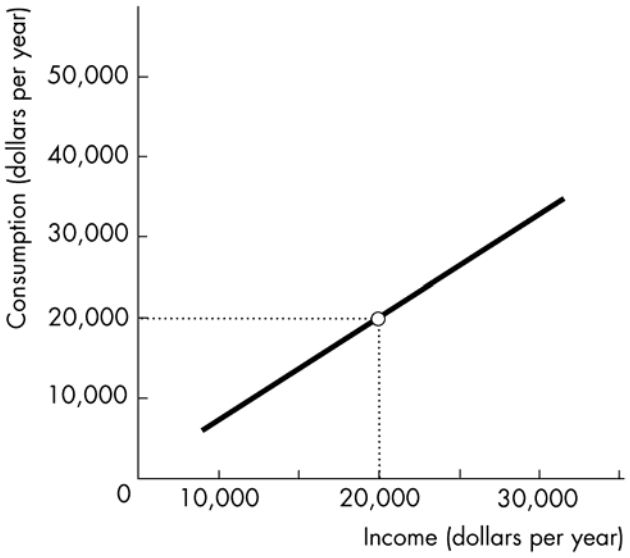


333) In the above figure, the relationship between income and expenditures is 333) _____
A) random. B) positive. C) independent. D) negative.

334) The relationship in the above figure suggests that when the interest rate is 5 percent, 334) _____
A) a decrease in income will be associated with an increase in expenditures.
B) an increase in income will be associated with a decrease in expenditures.
C) a decrease in income will be associated with a decrease in expenditures.
D) there is no relationship between expenditures and income.

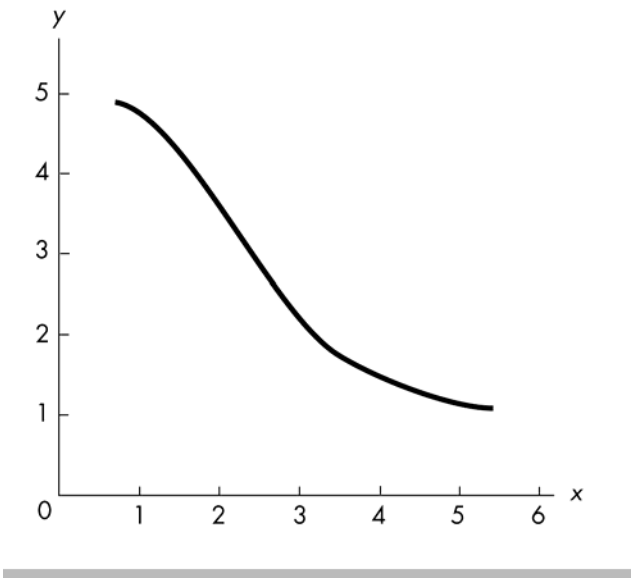
335) If variables *x* and *y* move up and down together, they are 335) _____
A) trend related. B) unrelated.
C) positively related. D) negative related.

336) The term "direct relationship" means the same as 336) _____
A) trend. B) positive relationship.
C) negative relationship. D) correlation.



337) The relationship between income and consumption illustrated in the figure above is 337) _____

A) negative and nonlinear.
B) positive and nonlinear.
C) negative and linear.
D) positive and linear.



338) The figure above shows 338) _____

A) a direct relationship.
B) a positive relationship.
C) a negative relationship.
D) no relationship between the variables.

339) The relationship between two variables, x and y, is a vertical line. Thus x and y are 339) _____

A) not related.
B) positively correlated.
C) negatively correlated.
D) falsely related.

340) The slope of a line equals the 340) _____
A) change in the variable measured along the x–axis divided by the change in the variable measured along the y–axis.
B) change in the variable measured along the x–axis minus the change in the variable measured along the y–axis.
C) change in the variable measured along the y–axis divided by the change in the variable measured along the x–axis.
D) change in the variable measured along the x–axis multiplied by the change in the variable measured along the y–axis.

341) A curve is plotted with y measured on the vertical axis and x measured on the horizontal axis. The slope of the curve equals 341) _____
A) y divided by the change in x.
B) the change in y divided by x.
C) y divided by x.
D) the change in y divided by the change in x.

342) The slope of a line 342) _____
A) is always a constant.
B) 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.
C) can never equal zero.
D) measures the value of the y–axis variable relative to the value of the x–axis variable.

343) The slope of a positive relationship is 343) _____
A) undefined.
B) constant as long as the relationship is nonlinear.
C) positive to the right of the maximum point and negative to the left.
D) positive.

344) In which of the following cases is the slope of a line positive? 344) _____
A) As x increases, y remains the same.
B) As x increases, y increases.
C) As x increases, y decreases.
D) As x increases, y equals a positive number.

345) 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 _____. 345) _____
A) either downward or upward–sloping; small
B) upward–sloping; small
C) downward–sloping; large
D) downward–sloping; small

346) 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 straight 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 346) _____
A) a bigger change in y.
B) an equal change in y.
C) no change in y.
D) a smaller change in y.

347) 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 straight line. Suppose that the slope of the line is equal to 1. This slope means that 347) _____
A) a change in x is associated with no 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 a bigger change in y.

348) 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 straight line. Suppose that the slope of the line is greater than 1. This slope means that 348) _____
A) a change in x is associated with no 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 bigger change in y.
D) a change in x is associated with a smaller change in y.

349) In which of the following cases is the slope of a line positive and less than infinity? 349) _____
A) As the variable measured on the x–axis increases, the variable measured on the y–axis decreases.
B) As the variable measured on the x–axis decreases, the variable measured on the y–axis decreases.
C) As the variable measured on the y–axis increases, the variable measured on the x–axis decreases.
D) As the variable measured on the y–axis increases, the variable measured on the x–axis does not change.

350) In a graph, a line has a negative slope if 350) _____
A) the line is vertical.
B) the line rises from left to right.
C) the line is horizontal.
D) the line rises from right to left.

351) 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. 351) _____
A) negative B) hypothetical C) positive D) tangent

352) If the slope of the relationship between savings and interest rates is 0.5, then 352) _____
A) savings and interest rates have a negative relationship.
B) savings and interest rates have no relationship.
C) savings and interest rates have an inverse relationship.
D) savings and interest rates have a positive relationship.

353) 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 353) _____
A) 1/2. B) –1/2. C) –2. D) 2.

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

354) 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 354) _____

A) 2. B) 3. C) –6. D) 6.

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

355) 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 $x = 6$? 355) _____

A) 70 B) –35 C) –0.057 D) –19.28

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

356) 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 356) _____

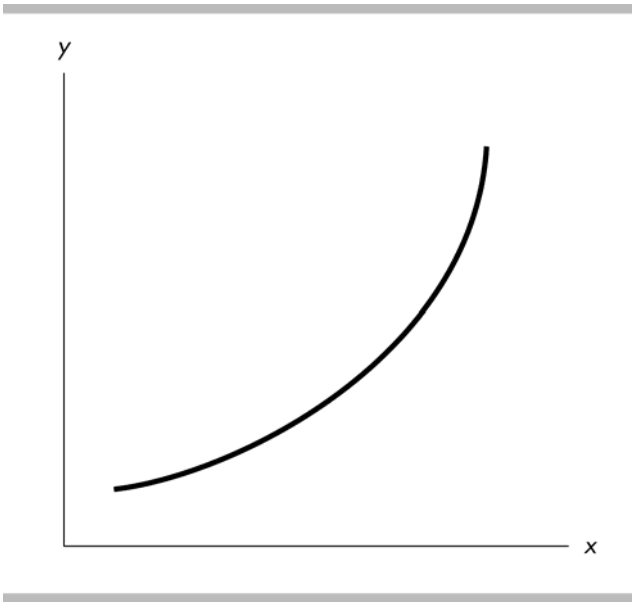
A) –0.25. B) 25. C) 0.25. D) 4.

357) 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 357) _____

A) –4. B) 100. C) 0.25. D) 0.

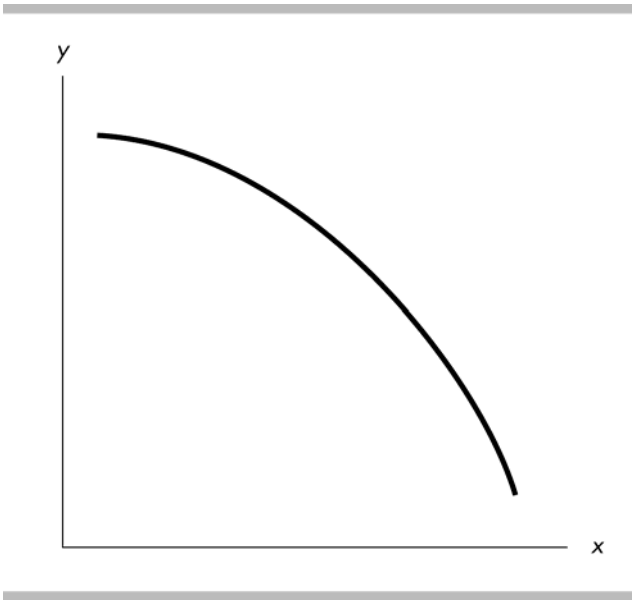
358) In the table above, Y is measured along the y–axis and X along the x–axis. The slope between points e and f is 358) _____

A) –25. B) –0.25. C) 4. D) 0.25.



359) In the above figure, the curve has a slope that is _____. 359) _____

A) positive and becoming smaller in magnitude
B) negative and becoming smaller in magnitude
C) negative and becoming larger in magnitude
D) positive and becoming larger in magnitude



360) In the above figure, the curve has a slope that is _____. 360) _____

A) negative and becoming larger in magnitude
B) positive and becoming smaller in magnitude
C) negative and becoming smaller in magnitude
D) positive and becoming larger in magnitude

x	y
0	4
1	5
2	8
3	13
4	20

361) 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 _____. 361) _____

A) positive; 5 B) positive; 3 C) negative; 6 D) negative; 8

362) The slope of a straight line is 362) _____

A) increasing. B) decreasing. C) variable. D) constant.

363) The slope of a straight line is 363) _____

A) constant. B) calculated as y/x at any point.
C) always equal to zero. D) always greater than zero.

364) With y measured on the vertical axis and x measured on the horizontal axis, the slope of a straight line is defined as 364) _____

A) y/x. B) x/y.
C) (change in x)/ (change in y). D) (change in y)/ (change in x).

365) 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 365) _____

A) 1/3. B) 3. C) –1/3. D) –3.

366) Along a straight line, the value of y is always equal to the value of x. The slope of the line is 366) _____

A) infinite. B) –1. C) 1. D) 0.

x	y
0	0
1	3
2	6
3	9
4	12
5	15

367) Using the data in the table above, with y measured on the vertical axis, the slope of the line relating y to x is 367) _____

A) 3. B) 1/3. C) 6. D) 1.

x–variable (on the horizontal axis)	y–variable (on the vertical axis)
10	28
15	31
20	34

368) The above table shows data on two variables. If these data were graphed, the slope of the line would be 368) _____

A) 3.
B) 5/3.
C) 3/5.
D) impossible to determine from the information given.

x–variable (on the horizontal axis)	y–variable (on the vertical axis)
8	14
10	18
12	22

369) The above table gives data on two variables. If these data were graphed, the slope of the line would be 369) _____

A) –4. B) 1. C) –2. D) 2.

370) The above table gives data on two variables. If these data were graphed, their relationship would 370) _____

A) be a curved line. B) nonexistent.
C) be a straight line. D) show a negative relationship.

x–variable (on the horizontal axis)	y–variable (on the vertical axis)
100	50
200	125
300	200

371) The above table shows data on two variables. If these data were graphed, the slope of the line would be 371) _____

A) 4/3. B) 1/2. C) 2/3. D) 3/4.

Quantity	Price
0	50
8	40
16	30
24	20
32	10
36	5

372) Using the data in the above table, 372) _____
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.

373) If we use the numbers in the above table to draw a graph, with the price on the vertical axis and the quantity on the horizontal axis, the line relating price and quantity has a slope of 373) _____
A) 8.0. B) 0.8. C) –8.0. D) –1.25.

Income (dollars per month)	Amount spent on restaurant meals (dollars per month)
50	20
100	40
150	60
200	80

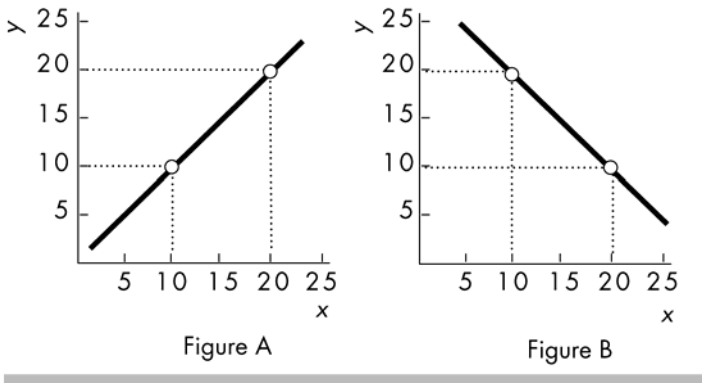
374) Using the data in the above table, if income is on the x–axis and the amount spent on restaurant meals is on the y–axis, the graph of the two variables would be 374) _____
A) horizontal. B) vertical.
C) upward sloping. D) downward sloping.

375) 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 375) _____
A) 0.5. B) 0.2. C) 0.4. D) 2.5.

x	y
100	500
200	300
300	100
400	–100

376) Based on the information in the table above, what is the relationship between x and y? 376) _____
A) inverse B) direct
C) positive D) No relationship exists between x and y.

377) Using the information in the table above, what does the slope of the line between x and y equal? 377) _____
A) 2 B) –0.5 C) –2 D) 5



378) In the above, which figure shows a linear relationship? 378) _____

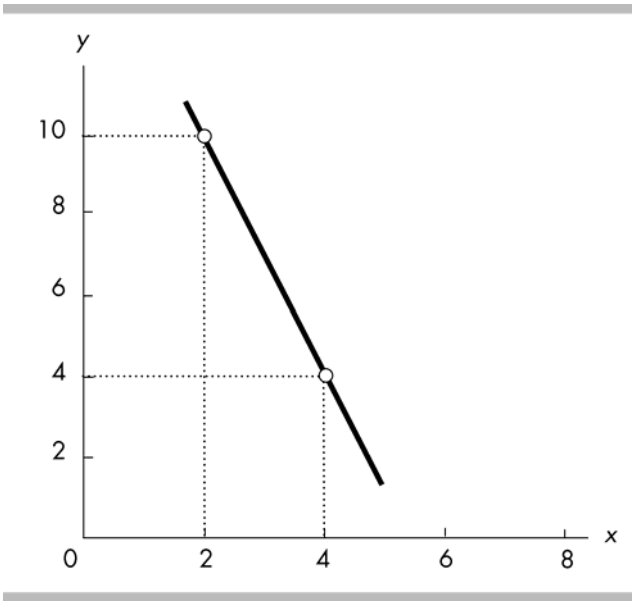
A) Figure A B) Figure B

C) both Figure A and Figure B D) neither Figure A nor Figure B

379) In the above, which figure shows a line with a slope of 1.0? 379) _____

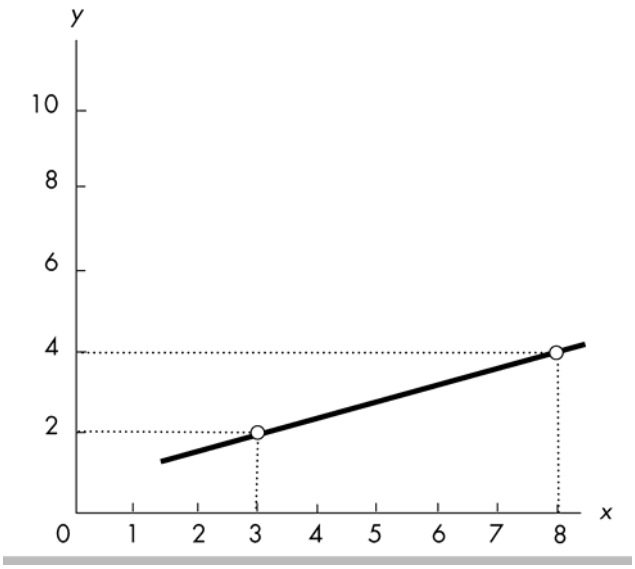
A) Figure A B) Figure B

C) both Figure A and Figure B D) neither Figure A nor Figure B

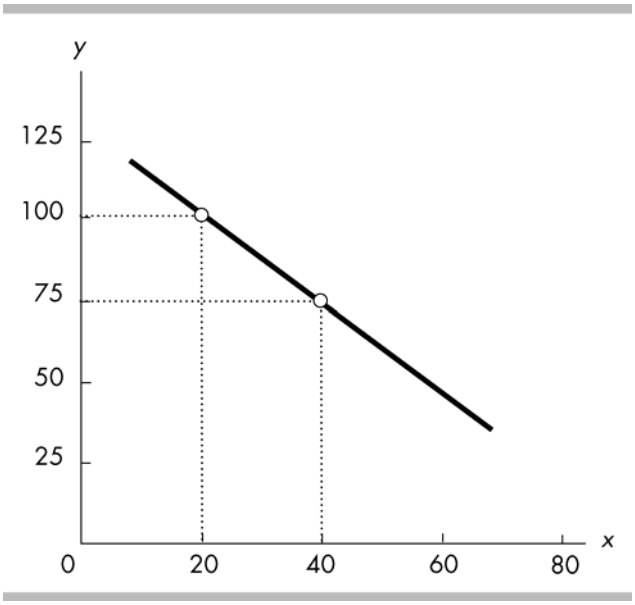


380) The slope of the line shown in the above figure is 380) _____

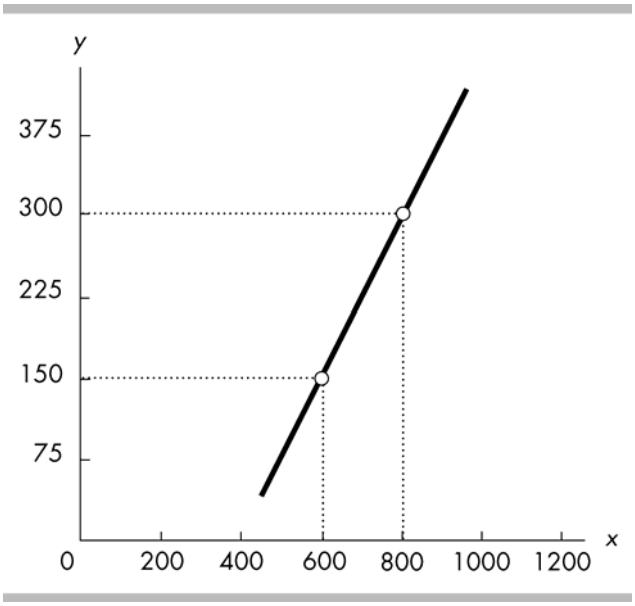
A) –3. B) –1. C) –5. D) –1/3.



381) The slope of the line shown in the above figure is 381) _____
A) 5. B) 2/3. C) 2/5. D) 5/2.

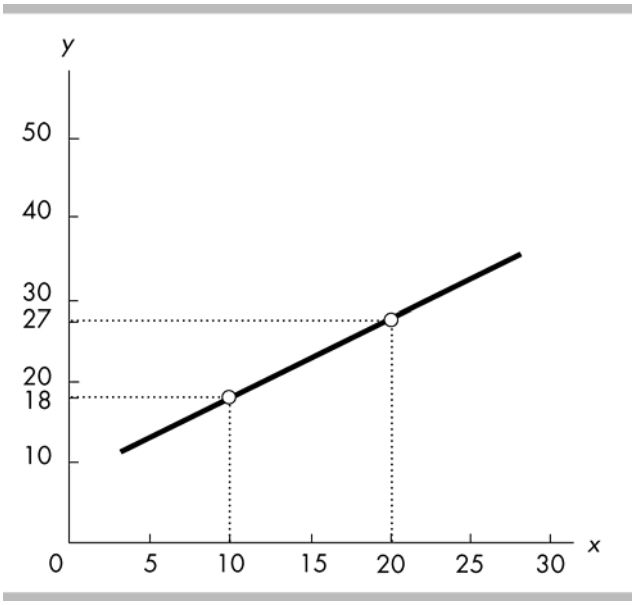


382) The slope of the line shown in the above figure is 382) _____
A) –1.25. B) –1 2/3. C) –1 1/3. D) –0.80.



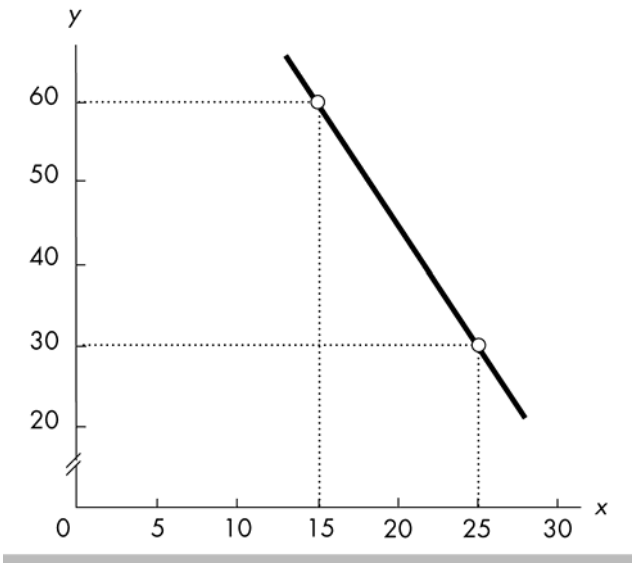
383) The slope of the line shown in the above figure is 383) _____

A) 0.25. B) 2. C) 0.75. D) 1 1/3.



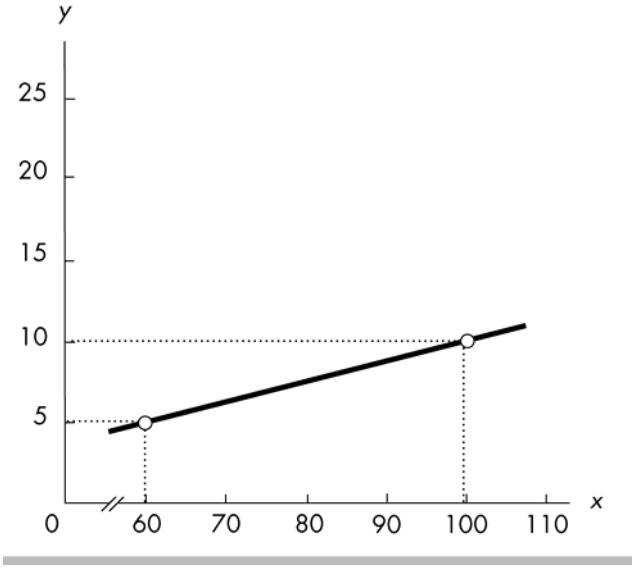
384) The slope of the line shown in the above figure is 384) _____

A) 2. B) 0.90. C) 1.5. D) 1.11.



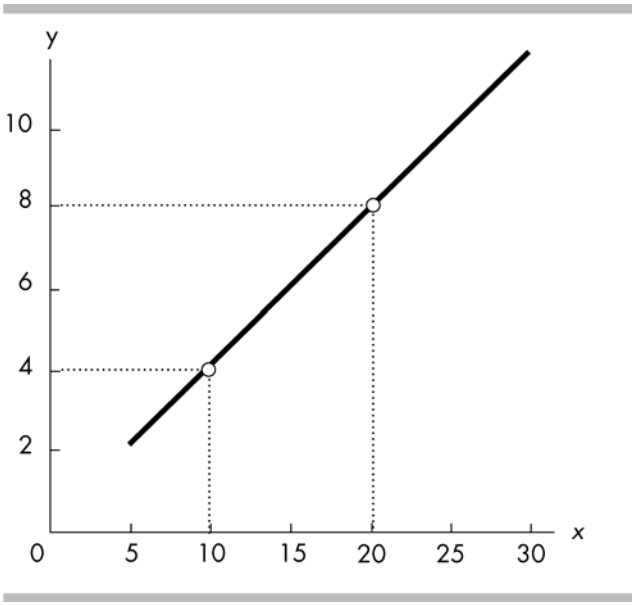
385) The slope of the line in the above figure is 385) _____

A) –4. B) –1/3. C) –1/2. D) –3.



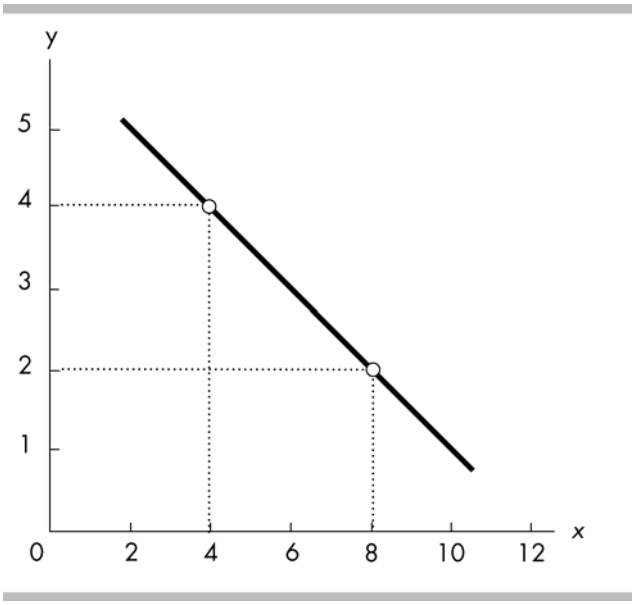
386) The slope of the line in the above figure is 386) _____

A) 0.05. B) 8. C) 0.10. D) 0.125.



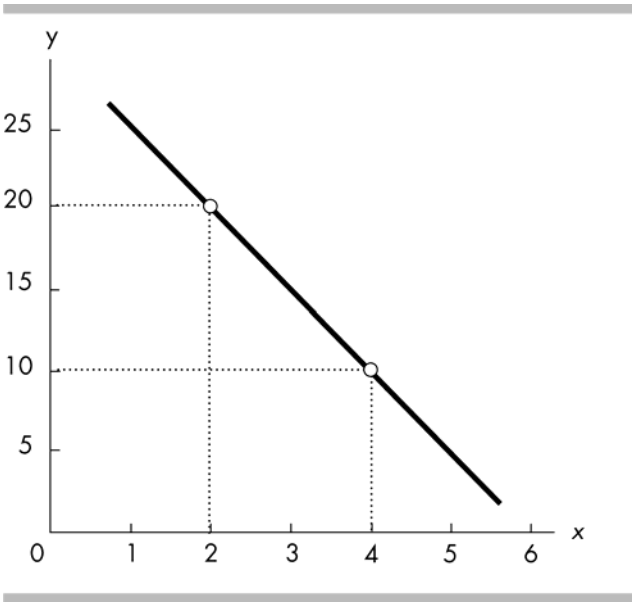
387) The slope of the line in the above figure is 387) _____

A) 5/2 = 2.5. B) –2/5 = –0.4. C) –5/2 = –2.5. D) 2/5 = 0.4.



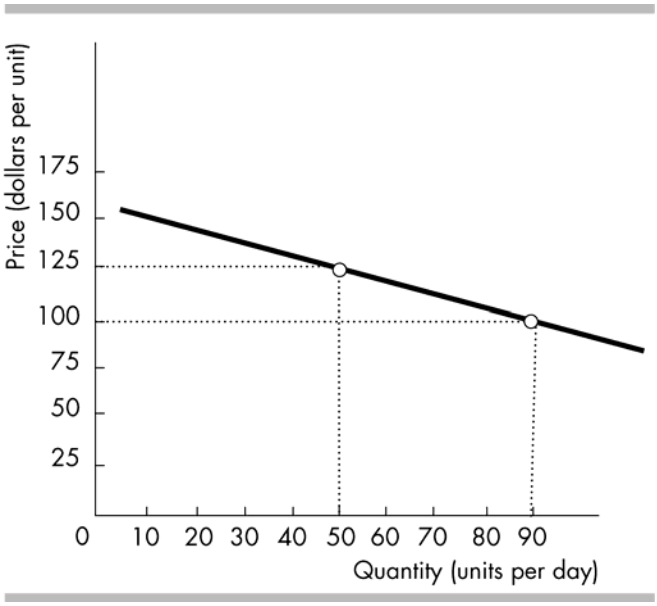
388) The slope of the line in the above figure is 388) _____

A) –2. B) –1/2 = –0.5. C) 2. D) 1/2 = 0.5.



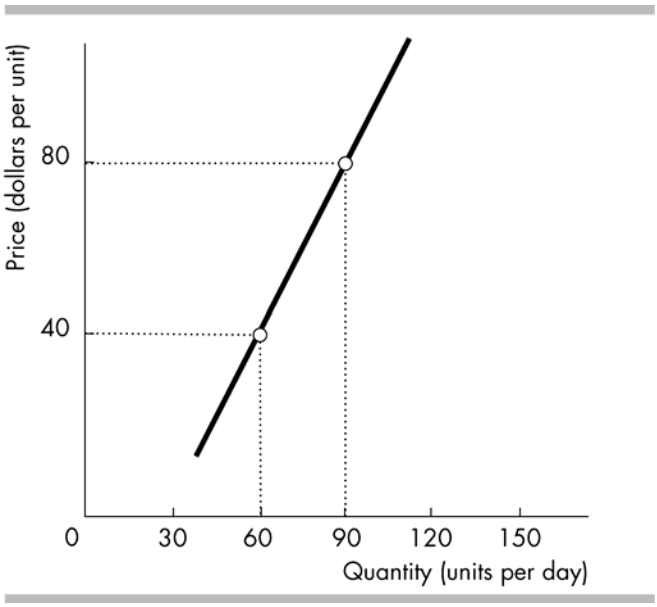
389) The slope of the line in the above figure is 389) _____

A) –5. B) –10. C) 5. D) 10.

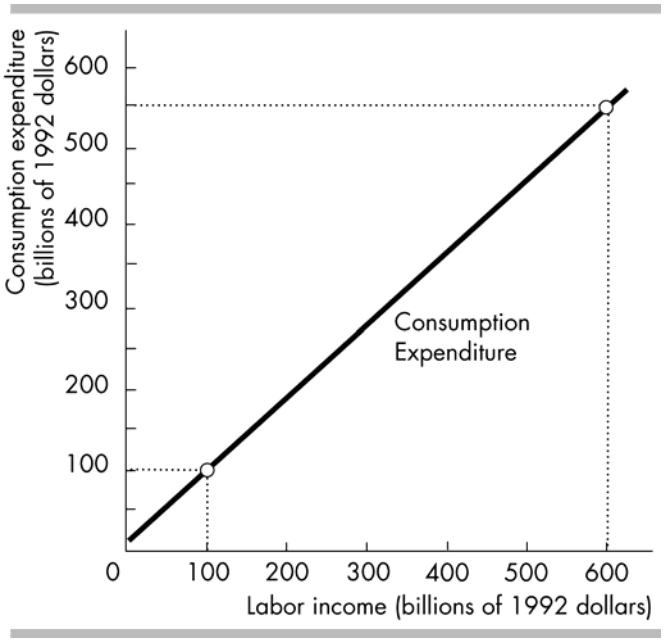


390) The slope of the line shown in the above figure is 390) _____

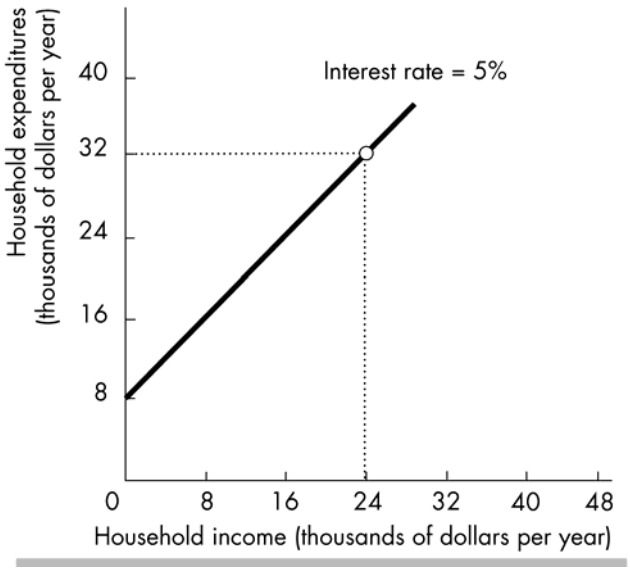
A) 5/8. B) –0.625. C) –1 3/8. D) –1 2/3.



391) The slope of the line shown in the above figure is 391) _____
A) 3/4. B) 2/3. C) 1 3/4. D) 1 1/3.

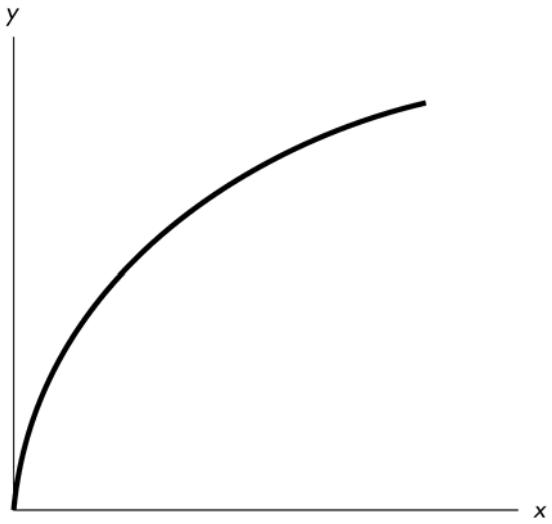


392) In the above figure, 392) _____
A) consumption expenditures are positively related to labor income.
B) the slope of the function depicted is 0.9.
C) consumption expenditures are a linear function of labor income.
D) All of the above answers are correct.



393) The slope of the line in the above figure is 393) _____
A) 1.0. B) –4. C) –2.5. D) –1.0.

394) On a graph, an upward–sloping curve that is flatter as you move away from the origin indicates a 394) _____
A) negative relationship with an increasing slope.
B) positive relationship with an increasing slope.
C) negative relationship with a decreasing slope.
D) positive relationship with a decreasing slope.

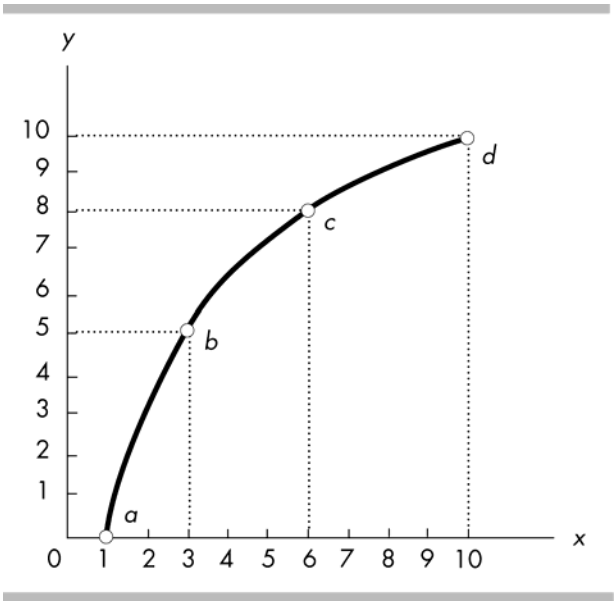


395) In the above figure, the curve's slope is 395) _____
A) negative and is becoming less steep. B) negative and is becoming steeper.
C) positive and is becoming less steep. D) positive and is becoming steeper.

396) 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 396) _____
A) price divided by quantity.
B) the change in price multiplied by the change in quantity.
C) the change in price divided by the change in quantity.
D) the change in quantity divided by the change in price.

397) The formula for the slope across an arc is used to approximate the slope for 397) _____
A) a positive relationship only.
B) a curved line.
C) linear relationships only.
D) a negative relationship only.

398) The slope of a curved line can be approximated by 398) _____
A) the average of the variable measured along the y–axis divided by the average of the variable measured along the x–axis.
B) the slope across an arc from one point on the curve to another point on the curve.
C) the inverse of the straight–line method.
D) the average of the variable measured along the x–axis divided by the average of the variable measured along the y–axis.



399) In the above figure, the slope across the arc between c and d is 399) _____
A) 2.
B) 1.
C) 4/3.
D) 1/2.

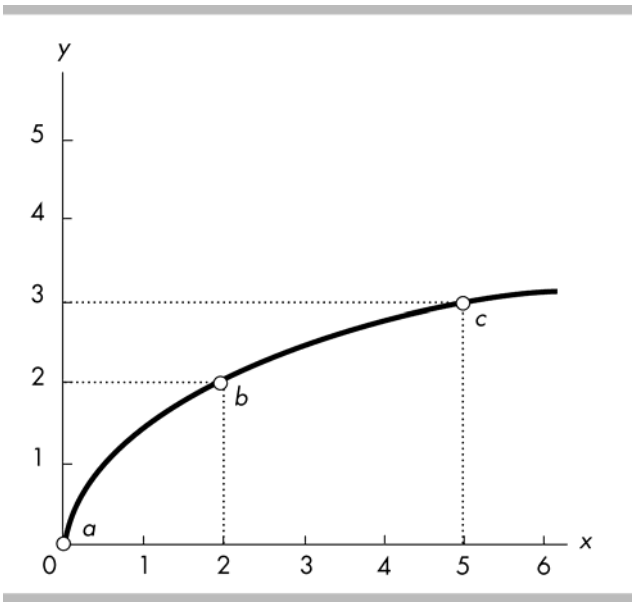
400) In the above figure, the slope across the arc between b and c is 400) _____
A) 1/2.
B) 1.
C) 2/3.
D) 2.

401) In the above figure, the slope across the arc between a and b is 401) _____
A) 5/2.
B) 1.
C) 3/2.
D) 2/5.

402) In the above figure, the slope at point b is 402) _____
A) 5/2. B) 1.
C) greater than 5/2. D) between 1 and 5/2.

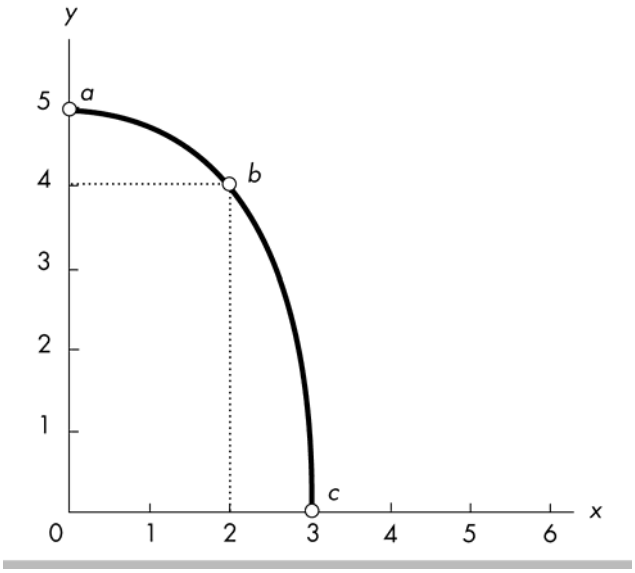
403) In the above figure, the relationship between x and y is 403) _____
A) negative, with slope increasing as x increases.
B) positive, with slope decreasing as x increases.
C) negative, with slope decreasing as x increases.
D) positive, with slope increasing as x increases.

404) The slope in the above figure is 404) _____
A) negative and increasing. B) negative and decreasing.
C) positive and decreasing. D) positive and increasing.



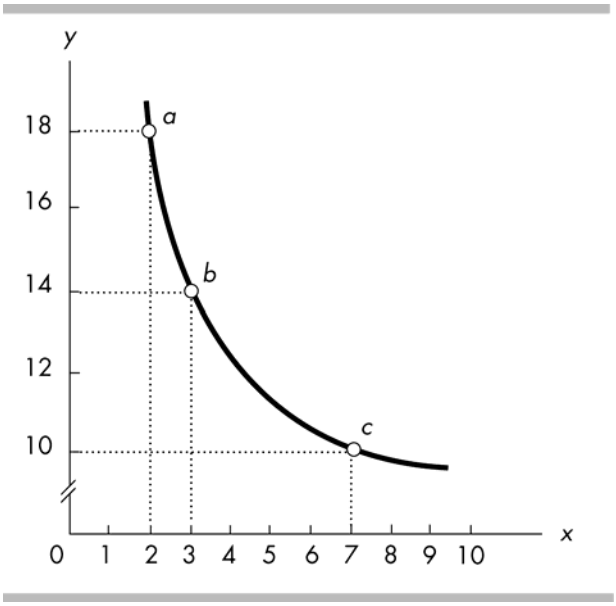
405) In the above figure, using the slope across an arc, the slope of the curve between points b and c is 405) _____
A) –1/3. B) 1/3. C) –3. D) 3.

406) In the above figure, using the slope across an arc, the slope of the curve between points a and c is 406) _____
A) –5/3. B) 5/3. C) 3/5. D) –3/5.

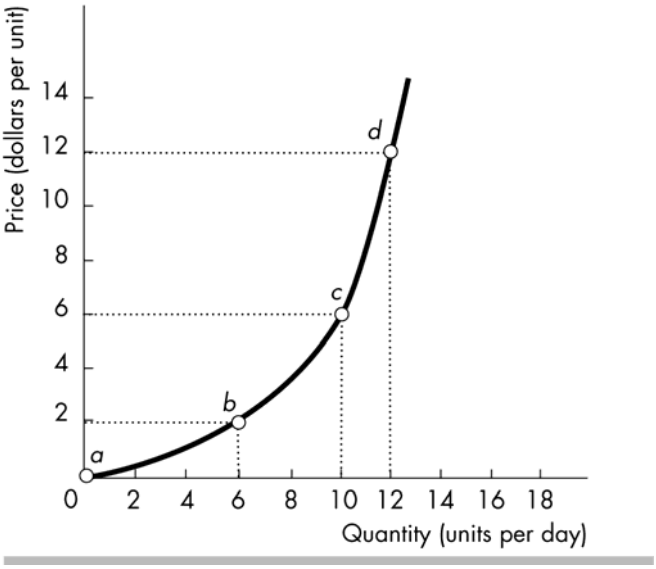


407) In the above figure, using the slope across an arc, the slope of the curve between points *a* and *b* is 407) _____
A) –2. B) 1/2. C) 2. D) –1/2.

408) In the above figure, using the slope across an arc, the slope of the curve between points *a* and *c* is 408) _____
A) –5/3. B) 3/5. C) 5/3. D) –3/5.



409) In the above figure, the slope across the arc between *a* and *b* is 409) _____
A) –4. B) –1/4. C) 1/4. D) 1.



410) In the above figure, the slope across the arc between b and d is 410) _____
A) 6/5. B) 1/3. C) 5/3. D) 1/2.

411) In the above figure, the slope at point b 411) _____
A) exceeds 2. B) lies between 1/3 and 1.
C) lies between 1 and 2. D) equals 1.

412) In the above figure, the slope across the arc between c and d is 412) _____
A) 12/11. B) 4. C) 3. D) 1/6.

413) In the above figure, the slope across the arc between a and b is 413) _____
A) 1. B) 3/5. C) 3. D) 1/3.

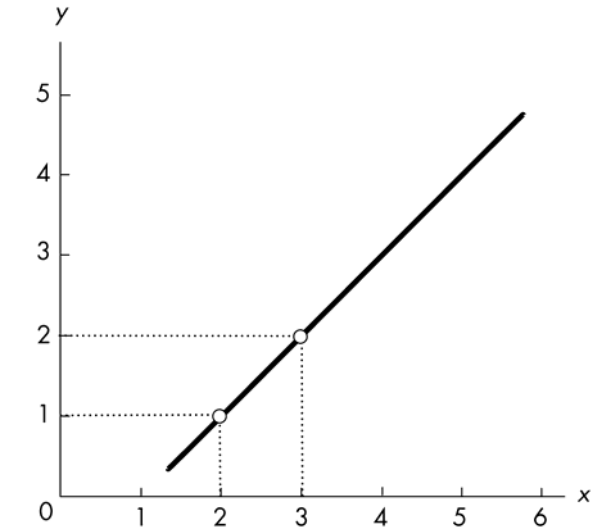
414) Along a curved line, the slope at the maximum 414) _____
A) is zero.
B) is less than zero.
C) is greater than zero.
D) may be greater than, less than, or equal to zero.

415) 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 415) _____
A) perpendicular line. B) line that has positive slope.
C) line that has a negative slope. D) line with slope equal to zero.

416) The slope of a negative relationship is 416) _____
A) constant as long as the relationship is nonlinear.
B) negative.
C) positive to the right of the maximum point and negative to the left.
D) undefined.

417) A linear relationship 417) _____

A) always has a maximum.
B) never has a constant slope.
C) always has a constant slope.
D) always slopes up to the right.

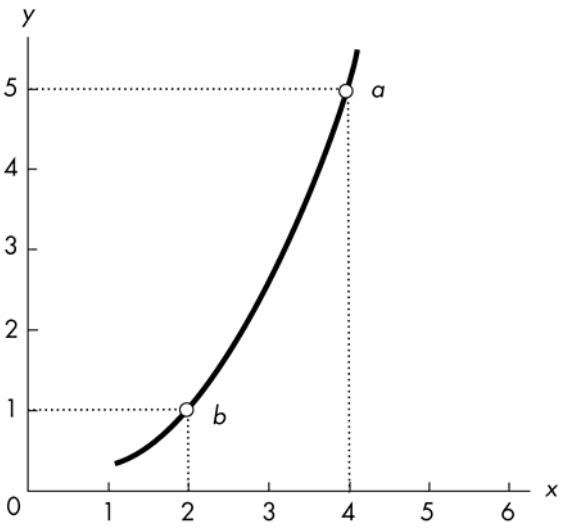


418) In the above figure, between $x = 2$ and $x = 3$, what is the slope of the line? 418) _____

A) 2 B) –1 C) 3 D) 1

419) 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 $x = 3$? 419) _____

A) The slope is the same.
B) The slope is greater between $x = 2$ and $x = 3$.
C) The slope is greater between $x = 4$ and $x = 5$.
D) The slope is not comparable.



420) The relationship between x and y in the above figure is 420) _____
A) positive with a decreasing slope. B) positive with an increasing slope.
C) negative with an increasing slope. D) negative with a decreasing slope.

421) In the above figure, the slope across the arc between points a and b equals 421) _____
A) 2. B) 5. C) 1. D) 4.

422) *Ceteris paribus* when graphing a relationship refers to 422) _____
A) changing the origin of the graph. B) holding constant all but two variables.
C) rescaling the coordinates. D) letting all the variables change at once.

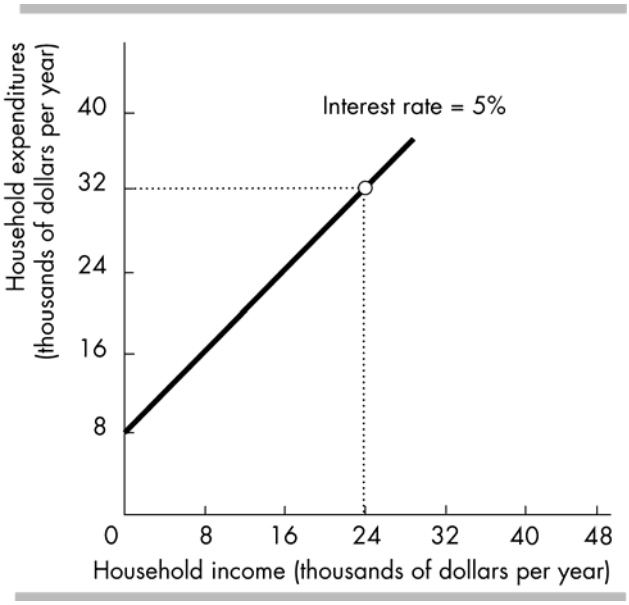
423) In evaluating a relationship between x and y, *ceteris paribus* means other variables 423) _____
A) are not relevant to x and y. B) are not changing while x and y change.
C) move in the same direction as x and y. D) move in opposite directions to x and y.

424) On a graph showing the relationship between x and y, the *ceteris paribus* condition implies that 424) _____
A) the value of y is held constant.
B) other variables not shown are held constant.
C) the value of x is held constant.
D) no other variables are related to x and y.

425) 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 425) _____
A) the price of pizza and quantity consumed of pizza are the only variables that are allowed to change.
B) consumers' taste for pizza and the income of pizza purchasers are the only variables that are allowed to change.
C) the price of a pizza and the income of pizza consumers are the only variables that are allowed to change.
D) None of the above answers are correct.

426) To graph a relationship among several variables, we hold all but _____ variable(s) constant and use the _____ assumption. 426) _____

A) three; marginal benefit
B) one; *ceteris paribus*
C) one; scarcity
D) two; *ceteris paribus*

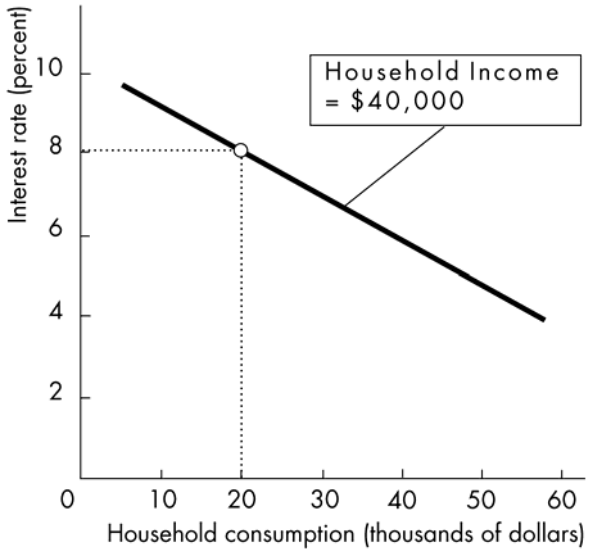


427) In the above figure, while moving along the line showing the relationship between household income and expenditure, 427) _____

A) household income is held constant.
B) the interest rate is held constant.
C) household expenditures are held constant.
D) no variable is held constant.

428) 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 428) _____

A) make the line negatively sloped.
B) shift the line vertically downward.
C) cause no change in the line's position.
D) shift the line vertically upward.



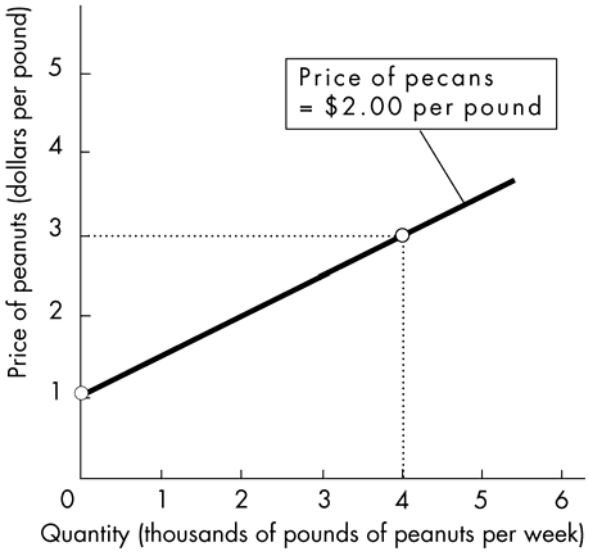
429) The slope of the line in the above figure is 429) _____
A) direct. B) positive. C) negative. D) independent.

430) In the above figure, when the interest rate is 8 percent and household income is $40,000, household consumption is 430) _____
A) $0. B) $35.000. C) $20,000. D) $60,000.

431) The relationship in the above figure indicates that 431) _____
A) a decrease in household consumption leads to a decrease in interest rates.
B) a decrease in household income will lead household consumption to increase.
C) a decrease in the interest rate leads to a decrease in household income.
D) none of the above

432) Household consumption depends on both income and interest rates. In the above figure 432) _____
A) household consumption is held constant. B) interest rates are held constant.
C) no variable is held constant. D) household income is held constant.

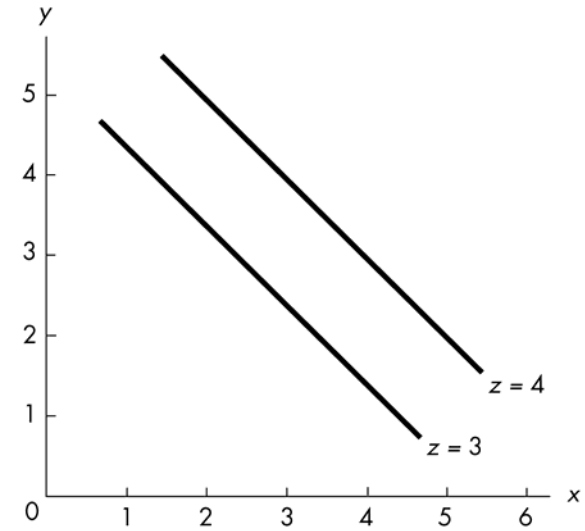
433) In the above figure, if household consumption is positively related to household income, then an increase in household income will 433) _____
A) cause a movement along the line. B) shift the line leftward.
C) make the line positively sloped. D) shift the line rightward.



434) 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 434) _____
A) no peanuts.
B) 2000 pounds of peanuts.
C) 1000 pounds of peanuts.
D) 4000 pounds of peanuts.

435) In the above figure, while drawing the line showing the relationship between the price of a pound of peanuts and the quantity sold, the 435) _____
A) quantity of peanuts that farmers supply is constant.
B) price of a pound of pecans is held constant.
C) price of a pound of peanuts is held constant.
D) Both answers A and B are true.

436) 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 436) _____
A) the curve will be unaffected.
B) there is a movement along the curve.
C) the curve will shift leftward.
D) the curve will shift rightward.



437) In the above figure, x is 437) _____
A) positively related to y and negatively related to z.
B) negatively related to y and positively related to z.
C) positively related to both y and z.
D) negatively related to both y and z.

438) In the figure above, *ceteris paribus*, an increase in x is associated with 438) _____
A) a decrease in z.
B) an increase in y.
C) a decrease in y.
D) None of the above answers is correct.

439) In the figure above, an increase in z leads to a 439) _____
A) rightward shift of the line showing the relationship between x and y.
B) leftward shift of the line showing the relationship between x and y.
C) movement down along one of the lines showing the relationship between x and y.
D) movement up along one of the lines showing the relationship between x and y.

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

440) Why do economists use graphs?

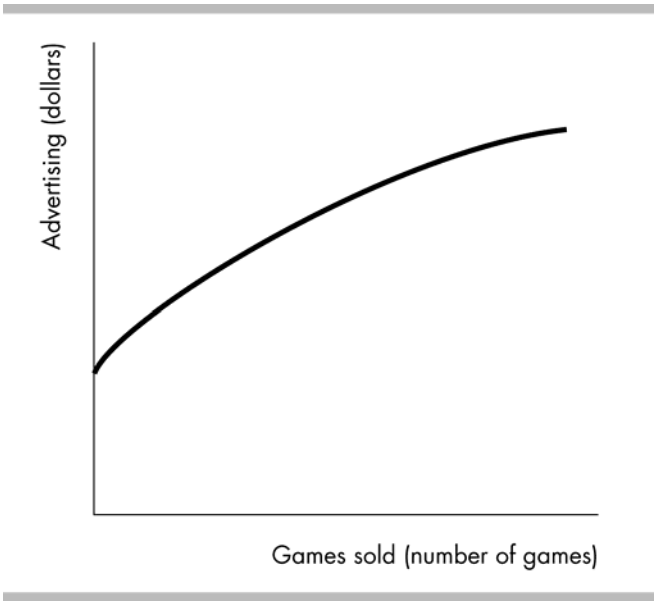
441) What are the two different types of relationships that variables can have? Explain each. What do these relationships look like when they are graphed?

442) What is the difference between a positive and a negative relationship?

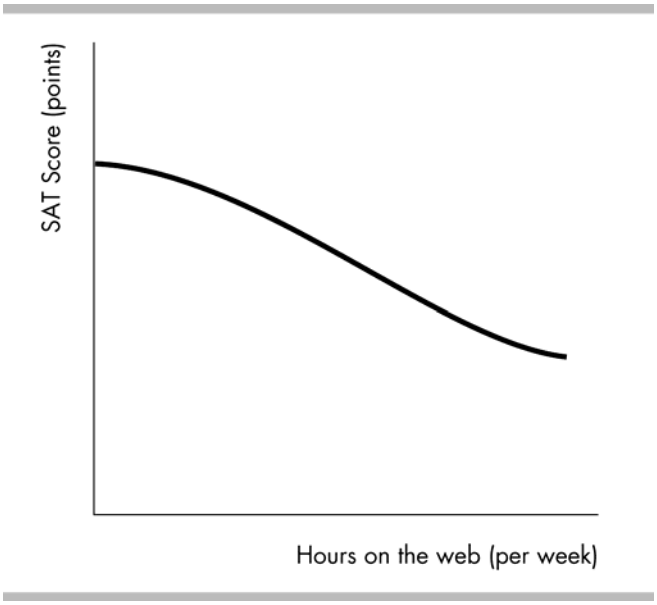
443) A graph of two variables is a vertical line. What is the interpretation of this result?

444) What does the slope of a straight line equal? How is the slope of a curved line calculated at a point on the curve?

445) "It is impossible to represent a three variable relationship in a two-dimensional graph." Is this statement true or false? Explain your answer.

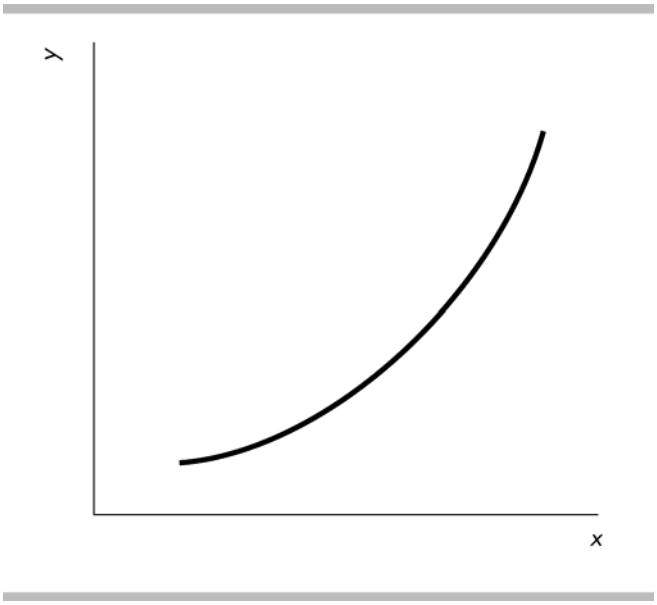


446) The figure above shows how the sales of the video game "Tomb Raider—Lara Retires" change when the advertising spent on the game changes. Is the relationship between advertising and the number of games sold positive, negative, or neither? Explain your answer.



447) 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.

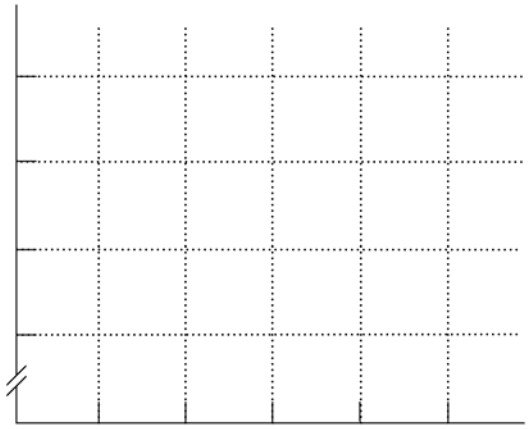
448) A graph has a point that is either a maximum or a minimum. To the left of the point, the slope of relationship is positive. To the right of the point, the slope is negative. Is the point a maximum point or a minimum point? Be sure to draw a figure that supports your answer.



449) In the figure above, what can you deduce about the slope of the curve?

450) If two points on a line are $x = 2$, $y = 5$ and $x = 7$, $y = 10$, what is the slope of this line?

Katie's income (dollars per year)	Katie's purchases (books per year)
50,000	14
70,000	16
90,000	18
110,000	20



451) 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?

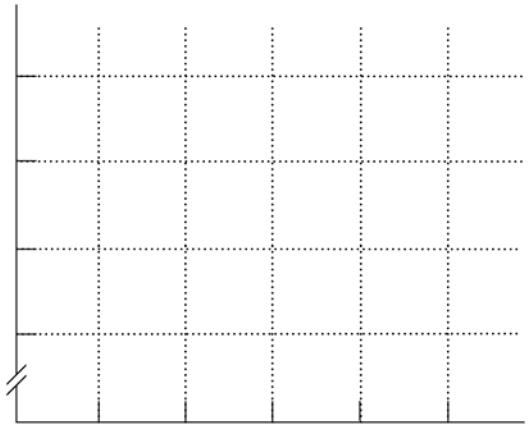
b) Plot the relationship between Katie's income and the number of books she purchases in the above figure. Measure income along the vertical axis and the number of books along the horizontal axis. Be sure to label the axes.

c) What is the slope of the relationship between $50,000 and $70,000 of income?

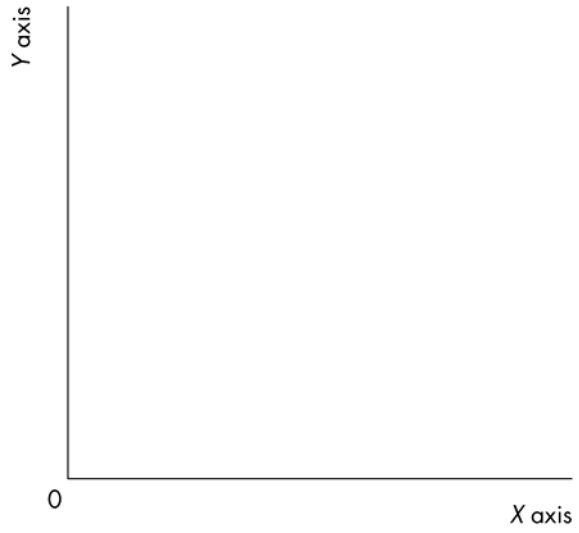
d) What is the slope of the relationship between $90,000 and $110,000 of income?

e) Comment on the similarity or dissimilarity of your answers to parts (c) and (d).

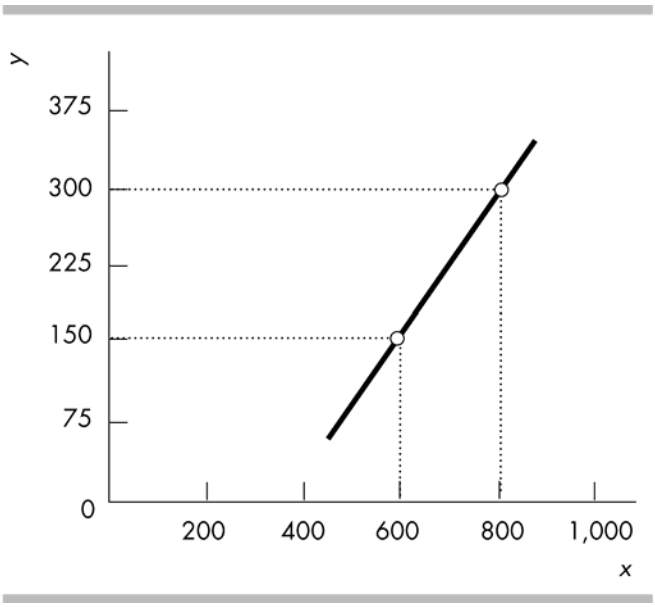
X	*Y*
2	20
4	16
6	12
8	8



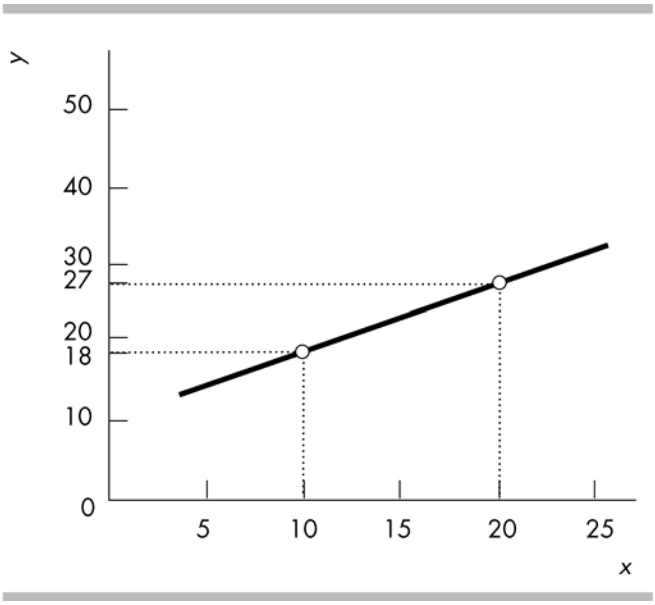
452) Graph the data in the table above in the figure. Label the axes.
   a) Is the relationship between *X* and *Y* positive or negative?
   b) What is the slope when *X* = 4?
   c) What is the slope when *X* = 8?



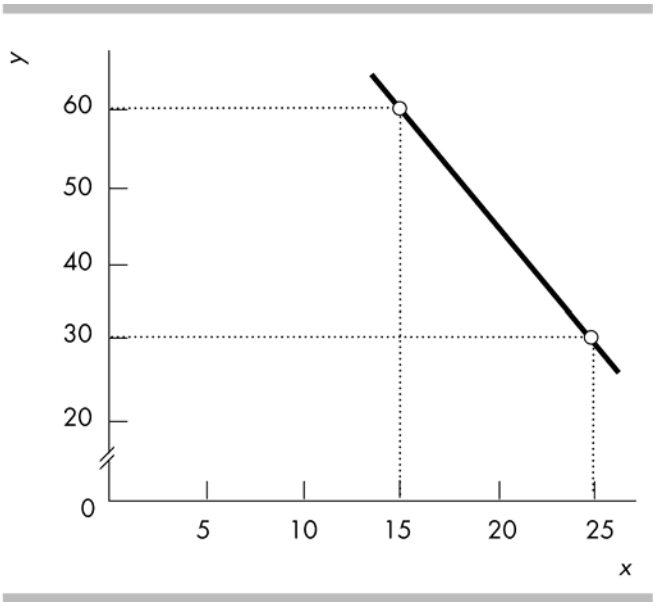
453) In the above diagram, draw a straight line with a slope of zero.



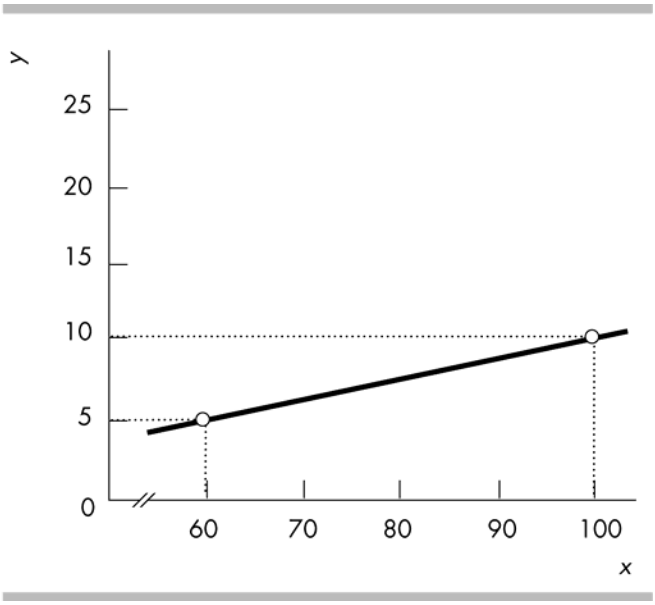
454) What does the slope of the line shown in the above figure equal?



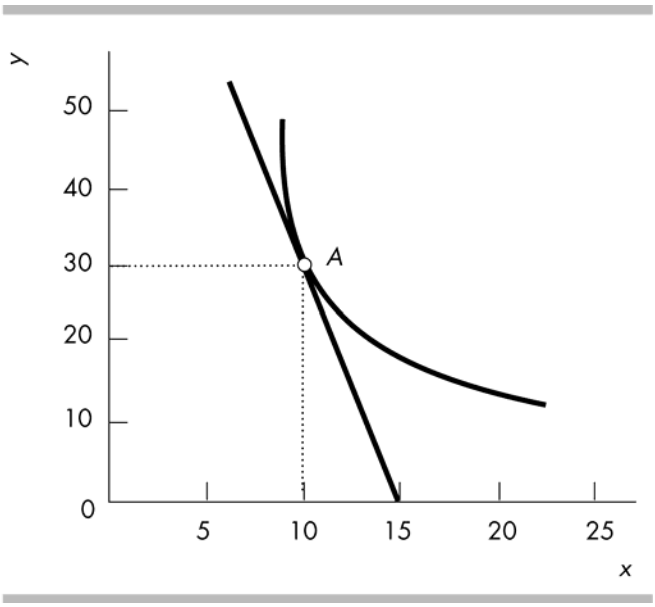
455) What does the slope of the line shown in the above figure equal?



456) What does the slope of the line shown in the above figure equal?

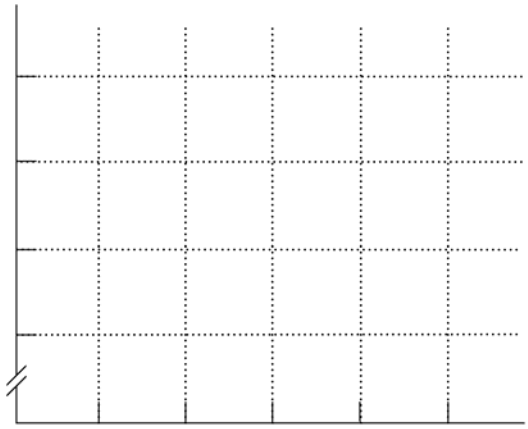


457) What does the slope of the line shown in the above figure equal?



458) What does the slope of the curved line at point *A* shown in the above figure equal?

Hours studies (per week)	SAT scores
2	900
4	1000
6	1050
8	1075
10	1090



459) Jamie is preparing to take his SAT tests. The table above shows how Jamie's score depends on the number of hours a 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 studies, his score will be 100 points higher. Plot the new relationship between the number of hours studied and Jamie's SAT score in the figure.
e) How many variables are involved in the figure you just completed?

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

460) The vertical axis of a graph shows only positive values. 460) _____

461) A scatter diagram plots the value of one economic variable against time. 461) _____

462) A cross–section graph can show how economic variables for different groups of people vary over time. 462) _____

463) If the x–axis variable increases while the y–axis variable decreases, the variables x and y are negatively related. 463) _____

464) A graph cannot be used to show that two variables are unrelated. 464) _____

465) When graphed, variables that are unrelated are shown by either a horizontal or a vertical line. 465) _____

466) The slope of a line is the change in the y-axis variable divided by the change in the x-axis variable. 466) _____

467) The slope of a straight line increases as the numbers on the x-axis become larger. 467) _____

468) 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. 468) _____

469) 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. 469) _____

470) 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. 470) _____

471) To graph a relationship that involves more than two variables, we use the *ceteris paribus* assumption. 471) _____

472) *Ceteris paribus* refers to the idea that if more than two variables are graphed, only one variable must be held constant. 472) _____

1) B
Topic: Scarcity
2) A
Topic: Scarcity
3) D
Topic: Scarcity
4) B
Topic: Scarcity
5) D
Topic: Scarcity
6) C
Topic: Scarcity
7) B
Topic: Scarcity
8) D
Topic: Scarcity
9) D
Topic: Scarcity
10) D
Topic: Scarcity
11) C
Topic: Scarcity
12) D
Topic: Scarcity
13) B
Topic: Scarcity
14) D
Topic: Scarcity
15) B
Topic: Scarcity
16) C
Topic: Incentive
17) C
Topic: Incentive
18) D
Topic: Definition of Economics
19) D
Topic: Definition of Economics
20) C
Topic: Definition of Economics
21) B
Topic: Definition of Economics
22) D
Topic: Microeconomics and Macroeconomics
23) D
Topic: Microeconomics and Macroeconomics

24) C
Topic: Microeconomics and Macroeconomics
25) C
Topic: Microeconomics and Macroeconomics
26) C
Topic: Microeconomics and Macroeconomics
27) A
Topic: Microeconomics and Macroeconomics
28) D
Topic: Microeconomics and Macroeconomics
29) D
Topic: Microeconomics and Macroeconomics
30) B
Topic: Microeconomics and Macroeconomics
31) A
Topic: Microeconomics and Macroeconomics
32) C
Topic: Microeconomics and Macroeconomics
33) B
Topic: Microeconomics and Macroeconomics
34) C
Topic: Microeconomics and Macroeconomics
35) B
Topic: Microeconomics and Macroeconomics
36) C
Topic: Microeconomics and Macroeconomics
37) B
Topic: Microeconomics and Macroeconomics
38) A
Topic: Microeconomics and Macroeconomics
39) D
Topic: Microeconomics and Macroeconomics
40) A
Topic: Microeconomics and Macroeconomics
41) D
Topic: Microeconomics and Macroeconomics
42) C
Topic: Microeconomics and Macroeconomics
43) C
Topic: Study Guide Question, Definition of Economics
44) A
Topic: Study Guide Question, Macroeconomics
45) C
Topic: MyEconLab Questions
46) D
Topic: MyEconLab Questions

47) D
Topic: MyEconLab Questions
48) C
Topic: What Goods and Services Are Produced?
49) B
Topic: What Goods and Services Are Produced?
50) A
Topic: What Goods and Services Are Produced?
51) C
Topic: What Goods and Services Are Produced?
52) D
Topic: What Goods and Services Are Produced?
53) C
Topic: What Goods and Services Are Produced?
54) C
Topic: What Goods and Services Are Produced?
55) B
Topic: Trends in Production
56) B
Topic: Trends in Production
57) C
Topic: Trends in Production
58) B
Topic: How Are Goods and Services Produced?
59) B
Topic: How Are Goods and Services Produced?
60) B
Topic: How Are Goods Produced?
61) C
Topic: How Are Goods and Services Produced?
62) C
Topic: For Whom are Goods and Services Produced?
63) D
Topic: Factors of Production
64) D
Topic: Factors of Production
65) B
Topic: Factors of Production
66) A
Topic: Factors of Production
67) D
Topic: Factors of Production
68) B
Topic: Factors of Production
69) D
Topic: Factors of Production

70) D
Topic: Factors of Production
71) A
Topic: Factors of Production
72) D
Topic: Factors of Production
73) B
Topic: Factors of Production
74) D
Topic: Factors of Production
75) C
Topic: Capital Stock
76) A
Topic: Land
77) C
Topic: Land
78) B
Topic: Land
79) D
Topic: Land
80) C
Topic: Labor
81) B
Topic: Human Capital
82) D
Topic: Human Capital
83) A
Topic: Human Capital
84) D
Topic: Human Capital
85) A
Topic: Human Capital
86) B
Topic: Capital
87) D
Topic: Entrepreneurship
88) C
Topic: Entrepreneurship
89) B
Topic: Entrepreneurship
90) D
Topic: Entrepreneurship
91) D
Topic: For Whom are Goods and Services Produced?
92) D
Topic: For Whom are Goods and Services Produced?

93) B
Topic: For Whom are Goods and Services Produced?
94) C
Topic: Social Interest
95) D
Topic: Study Guide Question, Two Big Economic Questions
96) D
Topic: Tradeoffs
97) B
Topic: Tradeoff and Opportunity Cost
98) C
Topic: Opportunity Cost
99) A
Topic: Opportunity Cost
100) C
Topic: Opportunity Cost
101) D
Topic: Opportunity Cost
102) D
Topic: Opportunity Cost
103) B
Topic: Opportunity Cost
104) B
Topic: Opportunity Cost
105) A
Topic: Opportunity Cost
106) C
Topic: Opportunity Cost
107) A
Topic: Opportunity Cost
108) B
Topic: Opportunity Cost
109) C
Topic: Opportunity Cost
110) B
Topic: Opportunity Cost
111) A
Topic: Opportunity Cost
112) B
Topic: Opportunity Cost
113) C
Topic: Opportunity Cost
114) A
Topic: Opportunity Cost
115) C
Topic: Opportunity Cost

116) D
Topic: Opportunity Cost
117) A
Topic: Opportunity Cost
118) A
Topic: Opportunity Cost
119) B
Topic: Opportunity Cost
120) D
Topic: Opportunity Cost
121) A
Topic: Opportunity Cost
122) C
Topic: Opportunity Cost
123) C
Topic: Opportunity Cost
124) D
Topic: Choices at the Margin
125) D
Topic: Marginal Benefit/Marginal Cost
126) A
Topic: Marginal Benefit
127) B
Topic: Marginal Benefit
128) B
Topic: Marginal Benefit
129) B
Topic: Marginal Benefit
130) C
Topic: Marginal Benefit
131) D
Topic: Marginal Benefit
132) D
Topic: Marginal Benefit
133) C
Topic: Marginal Cost
134) B
Topic: Marginal Cost
135) C
Topic: Marginal Cost
136) C
Topic: Marginal Analysis
137) D
Topic: Marginal Cost
138) D
Topic: Marginal Benefit/Marginal Cost

139) A
Topic: Marginal Benefit/Marginal Cost
140) A
Topic: Incentives, Marginal Cost and Marginal Benefit
141) B
Topic: Incentives, Marginal Cost and Marginal Benefit
142) B
Topic: Incentives, Marginal Cost and Marginal Benefit
143) C
Topic: Study Guide Question, Opportunity Cost
144) A
Topic: Study Guide Question, Opportunity Cost
145) A
Topic: MyEconLab Questions
146) B
Topic: MyEconLab Questions
147) C
Topic: MyEconLab Questions
148) B
Topic: Positive and Normative
149) A
Topic: Positive and Normative
150) D
Topic: Positive and Normative
151) D
Topic: Positive and Normative
152) A
Topic: Positive and Normative
153) D
Topic: Positive and Normative
154) B
Topic: Positive and Normative
155) B
Topic: Positive and Normative
156) B
Topic: Positive and Normative
157) C
Topic: Positive and Normative
158) D
Topic: Positive and Normative
159) D
Topic: Positive and Normative
160) B
Topic: Positive and Normative
161) B
Topic: Positive and Normative

162) B
Topic: Positive and Normative
163) C
Topic: Positive and Normative
164) C
Topic: Positive and Normative
165) C
Topic: Positive and Normative
166) A
Topic: Positive and Normative
167) D
Topic: Positive and Normative
168) B
Topic: Positive and Normative
169) D
Topic: Positive and Normative
170) A
Topic: Positive and Normative
171) A
Topic: Positive and Normative
172) D
Topic: Positive and Normative
173) B
Topic: Positive and Normative
174) A
Topic: Positive and Normative
175) D
Topic: Positive and Normative
176) C
Topic: Positive and Normative
177) B
Topic: Positive and Normative
178) C
Topic: Positive and Normative
179) A
Topic: Positive and Normative
180) D
Topic: Positive and Normative
181) C
Topic: Positive and Normative
182) B
Topic: Positive and Normative
183) B
Topic: Positive and Normative
184) B
Topic: Positive and Normative

185) A
Topic: Positive and Normative

186) D
Topic: Model Building

187) A
Topic: Model Building

188) C
Topic: Models

189) A
Topic: Study Guide Question, Positive and Normative

190) B
Topic: Study Guide Question, Positive and Normative

191) C
Topic: Study Guide Question, Economic Model

192) B
Topic: MyEconLab Questions

193) C
Topic: Scarcity

194) D
Topic: Microeconomics and Macroeconomics

195) A
Topic: Microeconomics and Macroeconomics

196) B
Topic: Microeconomics

197) C
Topic: Factors of Production

198) B
Topic: Human Capital

199) D
Topic: Positive and Normative

200) D
Topic: Positive and Normative

201) C
Topic: Positive and Normative

202) B
Topic: Positive and Normative

203) 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.
Topic: Scarcity

204) 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.
Topic: Scarcity

205) 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.
Topic: Scarcity

206) 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.
Topic: Scarcity

207) 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.
Topic: Scarcity

208) 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.
Topic: Definition of Economics

209) 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.
Topic: Microeconomics and Macroeconomics

210) 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.
Topic: Microeconomics and Macroeconomics

211) 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.
Topic: Microeconomics and Macroeconomics

212) 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.
Topic: Human Capital

213) 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.
Topic: Entrepreneurship

214) 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.
Topic: Self-Interest and Social Interest

215) 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.
Topic: Tradeoffs

216) 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.
Topic: Opportunity Cost

217) 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.
Topic: Opportunity Cost

218) 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.
Topic: Opportunity Cost

219) Marginal cost is the opportunity cost of an increase in an activity. Marginal benefit is the benefit of an increase in an activity.
Topic: Marginal Benefit and Marginal Cost

220) 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.
Topic: Incentives, Marginal Cost and Marginal Benefit

221) 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.
Topic: Incentives, Marginal Cost and Marginal Benefit

222) 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."
Topic: Positive and Normative

223) 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.
Topic: Positive and Normative

224) 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.
Topic: Positive and Normative

225) 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.
Topic: Positive and Normative

226) 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.
Topic: Positive and Normative

227) 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."
Topic: Positive and Normative

228) 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.
Topic: Positive and Normative

229) 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.
Topic: Marginal Benefit

230) 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).
Topic: Marginal Benefit and Marginal Cost

231) TRUE
Topic: Scarcity

232) FALSE
Topic: Scarcity

233) FALSE
Topic: Microeconomics

234) TRUE
Topic: Macroeconomics

235) FALSE
Topic: Human Capital

236) FALSE
Topic: Labor

237) TRUE
Topic: Production Trends

238) TRUE
Topic: Opportunity Cost

239) 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 you would earn $8,000, in exchange for a part-time job, where you earn $3,000, which means you give up $5,000. Although you don't pay this money explicitly, you lose the opportunity to earn it and so it's an opportunity cost of attending summer school.
c) First, your opportunity cost includes the cost that you pay explicitly ($1,900), which you have to pay only if 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.
Topic: Opportunity Cost

240) 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 this case she foregoes 40 hours per week of her free time, which she values more highly then the income from the best job she could find. To place a dollar value on this time, notice that the value that she places on this time 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 value 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 only if she goes to school. Also, as explained in the previous part, Jane is giving up the value of her free time, $6,000. Thus, 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 instance, if the summer school allows her to graduate one semester earlier, she can start to work and earn income earlier. The additional income and work experience that she gets because of her earlier graduation is what she gains if 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.
Topic: Marginal Analysis

241) 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 sales, 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.
Topic: Marginal Analysis

242) a) The university's marginal cost is $170. These are the extra cost of electricity ($100) and janitorial services ($70) that the university will only pay if you rent the Center. The costs of building the Center, insurance, and regular maintenance costs are not extra costs incurred because you rent the Center. The university has already paid for building it and pays the cost of insurance and regular maintenance no matter whether you rent the Center or not. 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.
Topic: Marginal Analysis

243) A
Topic: Graphing Data

244) C
Topic: Graphing Data

245) B
Topic: Graphing Data

246) B
Topic: Graphing Data

247) D
Topic: Graphing Data

248) A
Topic: Graphing Data

249) D
Topic: Graphing Data

250) D
Topic: Graphing Data

251) A
Topic: Graphing Data

252) A
Topic: Graphing Data

253) A
Topic: Graphing Data

254) B
Topic: Graphing Data

255) D
Topic: Graphing Data

256) D
Topic: Scatter Diagrams

257) B
Topic: Scatter Diagrams

258) A
Topic: Scatter Diagrams

259) D
Topic: Scatter Diagrams
260) C
Topic: Scatter Diagrams
261) A
Topic: Scatter Diagrams
262) B
Topic: Scatter Diagrams
263) D
Topic: Breaks in the Axes
264) C
Topic: Breaks in the Axes
265) B
Topic: Correlation and Causation
266) C
Topic: Study Guide Question, Scatter Diagrams
267) D
Topic: Study Guide Question, Scatter Diagrams
268) B
Topic: Variables That Move in the Same Direction
269) B
Topic: Variables That Move in the Same Direction
270) B
Topic: Variables That Move in the Same Direction
271) D
Topic: Variables That Move in the Same Direction
272) D
Topic: Variables That Move in the Same Direction
273) B
Topic: Variables That Move in the Same Direction
274) D
Topic: Variables That Move in the Same Direction
275) D
Topic: Variables That Move in the Same Direction
276) D
Topic: Variables That Move in the Same Direction
277) A
Topic: Variables That Move in the Same Direction
278) A
Topic: Variables That Move in the Same Direction
279) D
Topic: Variables That Move in the Same Direction
280) B
Topic: Variables That Move in the Same Direction
281) B
Topic: Variables That Move in the Same Direction

282) B
Topic: Variables That Move in the Same Direction
283) D
Topic: Variables That Move in the Same Direction
284) A
Topic: Variables That Move in the Same Direction
285) B
Topic: Variables That Move in the Same Direction
286) A
Topic: Variables That Move in the Same Direction
287) D
Topic: Variables That Move in the Same Direction
288) D
Topic: Variables That Move in the Same Direction
289) D
Topic: Variables That Move in the Same Direction
290) A
Topic: Variables That Move in the Same Direction
291) B
Topic: Variables That Move in Opposite Directions
292) D
Topic: Variables That Move in Opposite Directions
293) B
Topic: Variables That Move in Opposite Directions
294) B
Topic: Variables That Move in Opposite Directions
295) B
Topic: Variables That Move in Opposite Directions
296) B
Topic: Variables That Move in Opposite Directions
297) A
Topic: Variables That Move in Opposite Directions
298) D
Topic: Variables That Move in Opposite Directions
299) D
Topic: Variables That Move in Opposite Directions
300) D
Topic: Variables That Move in Opposite Directions
301) C
Topic: Variables That Move in Opposite Directions
302) D
Topic: Variables That Move in Opposite Directions
303) B
Topic: Variables That Move in Opposite Directions
304) A
Topic: Variables That Move in Opposite Directions

305) D
Topic: Variables That Move in Opposite Directions
306) C
Topic: The Slope of a Relationship
307) B
Topic: Variables That Move in Opposite Directions
308) D
Topic: Variables That Move in Opposite Directions
309) A
Topic: Variables That Move in Opposite Directions
310) B
Topic: Variables That Move in the Same Direction
311) A
Topic: Variables That Move in Opposite Directions
312) A
Topic: Maximum and Minimum Points
313) C
Topic: Variables That Have a Maximum or Minimum
314) B
Topic: Variables That Have a Maximum or Minimum
315) A
Topic: Variables That Have a Maximum or Minimum
316) C
Topic: Variables That Have a Maximum or Minimum
317) A
Topic: Maximum and Minimum Points
318) B
Topic: Variables That Have a Maximum or a Minimum
319) D
Topic: Variables That Have a Maximum or a Minimum
320) D
Topic: Maximum and Minimum Points
321) B
Topic: Maximum and Minimum Points
322) C
Topic: Variables That Are Unrelated
323) B
Topic: Variables That Are Unrelated
324) C
Topic: Variables That Are Unrelated
325) C
Topic: Variables That Are Unrelated
326) A
Topic: Variables That Are Unrelated
327) D
Topic: Variables That Are Unrelated

328) B
Topic: Variables That Are Unrelated
329) B
Topic: Variables That Are Unrelated
330) A
Topic: Variables That Are Unrelated
331) C
Topic: Variables That Are Unrelated
332) B
Topic: Variables That Are Unrelated
333) B
Topic: Variables That Move in the Same Direction
334) C
Topic: Variables That Move in the Same Direction
335) C
Topic: Study Guide Question, Variables That Move Same Direction
336) B
Topic: Study Guide Question, Variables That Move Same Direction
337) D
Topic: Study Guide Question, Variables That Move Same Direction
338) C
Topic: Study Guide Question, Variables That Move Opposite Direction
339) A
Topic: Study Guide Question, Variables That Are Unrelated
340) C
Topic: The Slope of a Relationship
341) D
Topic: The Slope of a Relationship
342) B
Topic: The Slope of a Relationship
343) D
Topic: The Slope of a Relationship
344) B
Topic: The Slope of a Relationship
345) A
Topic: The Slope of a Relationship
346) D
Topic: The Slope of a Relationship
347) B
Topic: The Slope of a Relationship
348) C
Topic: The Slope of a Relationship
349) B
Topic: The Slope of a Relationship
350) D
Topic: The Slope of a Relationship

351) A
Topic: The Slope of a Relationship
352) D
Topic: The Slope of a Relationship
353) B
Topic: The Slope of a Relationship
354) B
Topic: The Slope of a Relationship
355) B
Topic: The Slope of a Relationship
356) C
Topic: The Slope of a Relationship
357) D
Topic: The Slope of a Relationship
358) B
Topic: The Slope of a Relationship
359) D
Topic: The Slope of a Relationship
360) A
Topic: The Slope of a Relationship
361) B
Topic: The Slope of a Relationship
362) D
Topic: The Slope of a Straight Line
363) A
Topic: The Slope of a Straight Line
364) D
Topic: The Slope of a Straight Line
365) A
Topic: The Slope of a Straight Line
366) C
Topic: The Slope of a Straight Line
367) A
Topic: The Slope of a Straight Line
368) C
Topic: The Slope of a Straight Line
369) D
Topic: The Slope of a Straight Line
370) C
Topic: The Slope of a Straight Line
371) D
Topic: The Slope of a Straight Line
372) C
Topic: Variables That Move in Opposite Directions
373) D
Topic: The Slope of a Relationship

374) C
Topic: Variables That Move in the Same Direction
375) C
Topic: The Slope of a Relationship
376) A
Topic: Variables That Move in Opposite Directions
377) C
Topic: The Slope of a Straight Line
378) C
Topic: Linear Relationship
379) A
Topic: The Slope of a Straight Line
380) A
Topic: The Slope of a Straight Line
381) C
Topic: The Slope of a Straight Line
382) A
Topic: The Slope of a Straight Line
383) C
Topic: The Slope of a Straight Line
384) B
Topic: The Slope of a Straight Line
385) D
Topic: The Slope of a Straight Line
386) D
Topic: The Slope of a Straight Line
387) D
Topic: The Slope of a Straight Line
388) B
Topic: The Slope of a Straight Line
389) A
Topic: The Slope of a Straight Line
390) B
Topic: The Slope of a Straight Line
391) D
Topic: The Slope of a Straight Line
392) D
Topic: Slope
393) A
Topic: The Slope of a Straight Line
394) D
Topic: The Slope of a Curved Line
395) C
Topic: Slope of a Curved Line
396) C
Topic: The Slope of a Curved Line

397) B
Topic: The Slope Across an Arc
398) B
Topic: The Slope Across an Arc
399) D
Topic: The Slope Across an Arc
400) B
Topic: The Slope Across an Arc
401) A
Topic: The Slope Across an Arc
402) D
Topic: The Slope at a Point
403) B
Topic: The Slope of a Relationship
404) C
Topic: The Slope of a Relationship
405) B
Topic: Slope Across an Arc
406) C
Topic: Slope Across an Arc
407) D
Topic: Slope Across an Arc
408) A
Topic: Slope Across an Arc
409) A
Topic: The Slope Across an Arc
410) C
Topic: Slope Across an Arc
411) B
Topic: Slope Across an Arc
412) C
Topic: Slope Across an Arc
413) D
Topic: Slope Across an Arc
414) A
Topic: Maximum and Minimum Points
415) D
Topic: Variables That Are Unrelated
416) B
Topic: Study Guide Question, The Slope of a Relationship
417) C
Topic: Study Guide Question, The Slope of a Straight Line
418) D
Topic: Study Guide Question, The Slope of a Straight Line
419) A
Topic: Study Guide Question, The Slope of a Straight Line

420) B
Topic: Study Guide Question, The Slope Across an Arc

421) A
Topic: Study Guide Question, The Slope Across an Arc

422) B
Topic: Graphing Relationships, Two+ Variables, Ceteris Paribus

423) B
Topic: Graphing Relationships, Two+ Variables, Ceteris Paribus

424) B
Topic: Graphing Relationships, Two+ Variables, Ceteris Paribus

425) A
Topic: Graphing Relationships, Two+ Variables, Ceteris Paribus

426) D
Topic: Graph Relationships–More than Two Variables, Ceteris Paribus

427) B
Topic: Graphing Relationships Among More Than Two Variables

428) B
Topic: Graphing Relationships Among More Than Two Variables

429) C
Topic: Graphing Relationships Among More Than Two Variables

430) C
Topic: Graphing Relationships Among More Than Two Variables

431) D
Topic: Graphing Relationships Among More Than Two Variables

432) D
Topic: Graphing Relationships Among More Than Two Variables

433) D
Topic: Graphing Relationships Among More Than Two Variables

434) A
Topic: Graphing Relationships Among More Than Two Variables

435) B
Topic: Graphing Relationships Among More Than Two Variables

436) C
Topic: Graphing Relationships Among More Than Two Variables

437) B
Topic: Study Guide Question, Graphing Relationships Among 2+ Var.

438) B
Topic: Study Guide Question, Graphing Relationships Among 2+ Var.

439) A
Topic: Study Guide Question, Graphing Relationships Among 2+ Var.

440) 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.
Topic: Graphing Data

441) 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.
Topic: Relationships

442) 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.
Topic: Relationships

443) 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.
Topic: Unrelated Variables

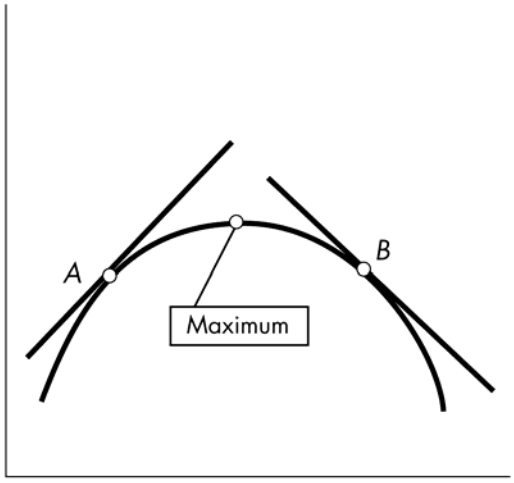
444) The slope of a straight line is calculated between two points on the line. Between the two points on the line, the slope equals the change in the value of the variable measured on the vertical axis (the y-axis) divided by the change in the value of the variable measured on the horizontal axis (the x-axis). The slope of a curved line calculated at a point on the curve is equal to the slope of a tangent straight 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.
Topic: Slope

445) 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.
Topic: Graphing Relationships Among More Than Two Variables

446) 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.
Topic: Positive Relationship

447) 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.
Topic: Negative Relationship

448)

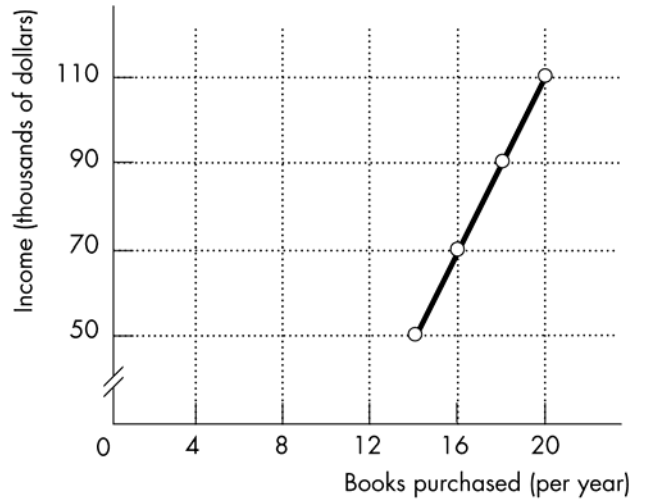


The point is a maximum point. Examine the figure above. The slope of a curved line at any point equals the slope of a straight line that touches the curved line at only that one point. Thus to the left of the maximum point, take point A. The slope of the straight line that touches the curved line at only point A is positive, so the slope of the relationship is positive. Similarly, take point B to the right of the maximum point. As the straight line shows, 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.
Topic: Maximum

449) The slope is positive and increasing in size as we move rightward along the curve.
Topic: Slope

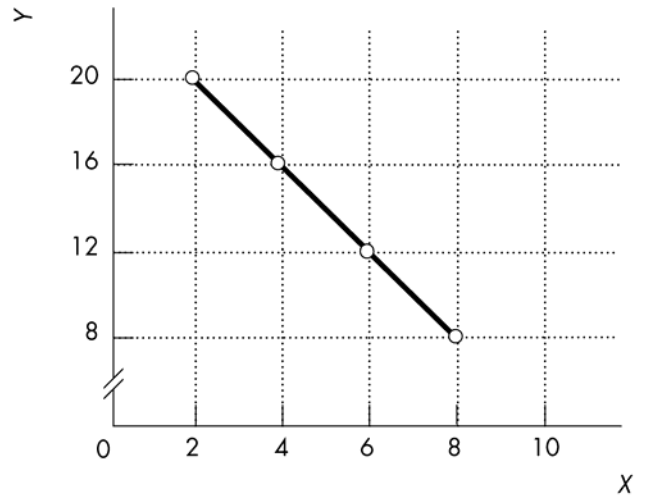
450) The slope equals the change in the y-variable divided by the change in the x-variable. So, the slope equals (10 – 5)/(7 – 2) = (5)/(5) = 1.00.
Topic: Slope

451) a) There is a positive relationship. When Katie's income increases, so too does her purchase of books.



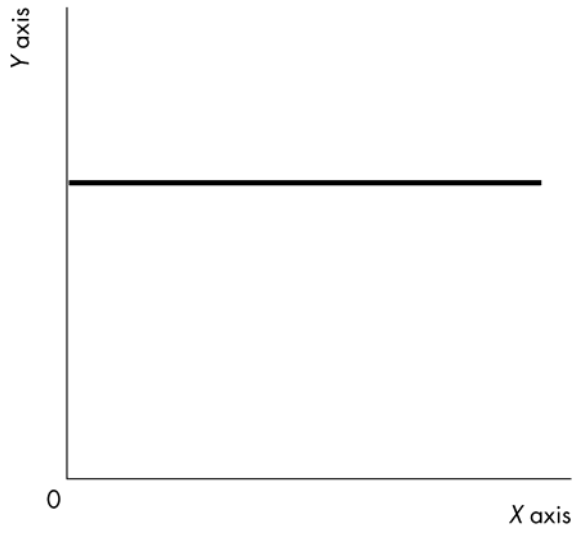
b) The relationship is plotted in the figure above.
c) The slope equals the change in the value of the variable measured on the vertical axis, income, divided by the change in the value of the variable measured along the horizontal axis, the number of books. Between $50,000 and $70,000 of income, the 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 income 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 Katie's 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.
Topic: Slope of a Straight Line

452)



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.
Topic: Slope of a Straight Line

453)



A horizontal line has a slope of zero. The figure above shows a horizontal line with a slope of zero.
Topic: Slope of a Straight Line

454) 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.
Topic: Slope of a Straight Line

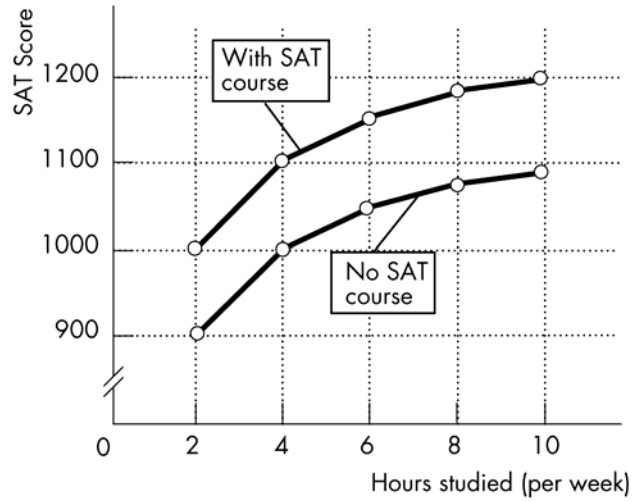
455) The slope equals the change in variable on the y–axis divided by the change in the variable on the x–axis, or (18 – 27)/(10 – 20) = 0.90.
Topic: Slope of a Straight Line

456) 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.
Topic: Slope of a Straight Line

457) 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.
Topic: Slope of a Straight Line

458) 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.
Topic: Slope of a Curved Line

459)



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 increases.
d) The figure above also plots the relationship between the hours Jamie studies and his SAT score if Jamie takes an SAT preparation course.
e) There are three variables: The number of hours Jamie studies, whether or not he takes an SAT preparation course, and his SAT score.
Topic: Graphing Relationships Among More Than Two Variables

460) FALSE
Topic: Graphing Data

461) FALSE
Topic: Graphing Data

462) FALSE
Topic: Graphing Data

463) TRUE
Topic: Graphs Used in Economic Models

464) FALSE
Topic: Graphs Used in Economic Models

465) TRUE
Topic: Graphs Used in Economic Models

466) TRUE
Topic: The Slope of a Relationship

467) FALSE
Topic: The Slope of a Relationship

468) TRUE
Topic: The Slope of a Relationship

469) FALSE
Topic: The Slope of a Relationship

470) TRUE
Topic: The Slope of a Relationship

471) TRUE
Topic: Graphing Relationships Among More Than Two Variables

472) FALSE
Topic: Graphing Relationships Among More Than Two Variables