Test Bank for Principles of Microeconomics Version 8 0 8th Edition by Taylor

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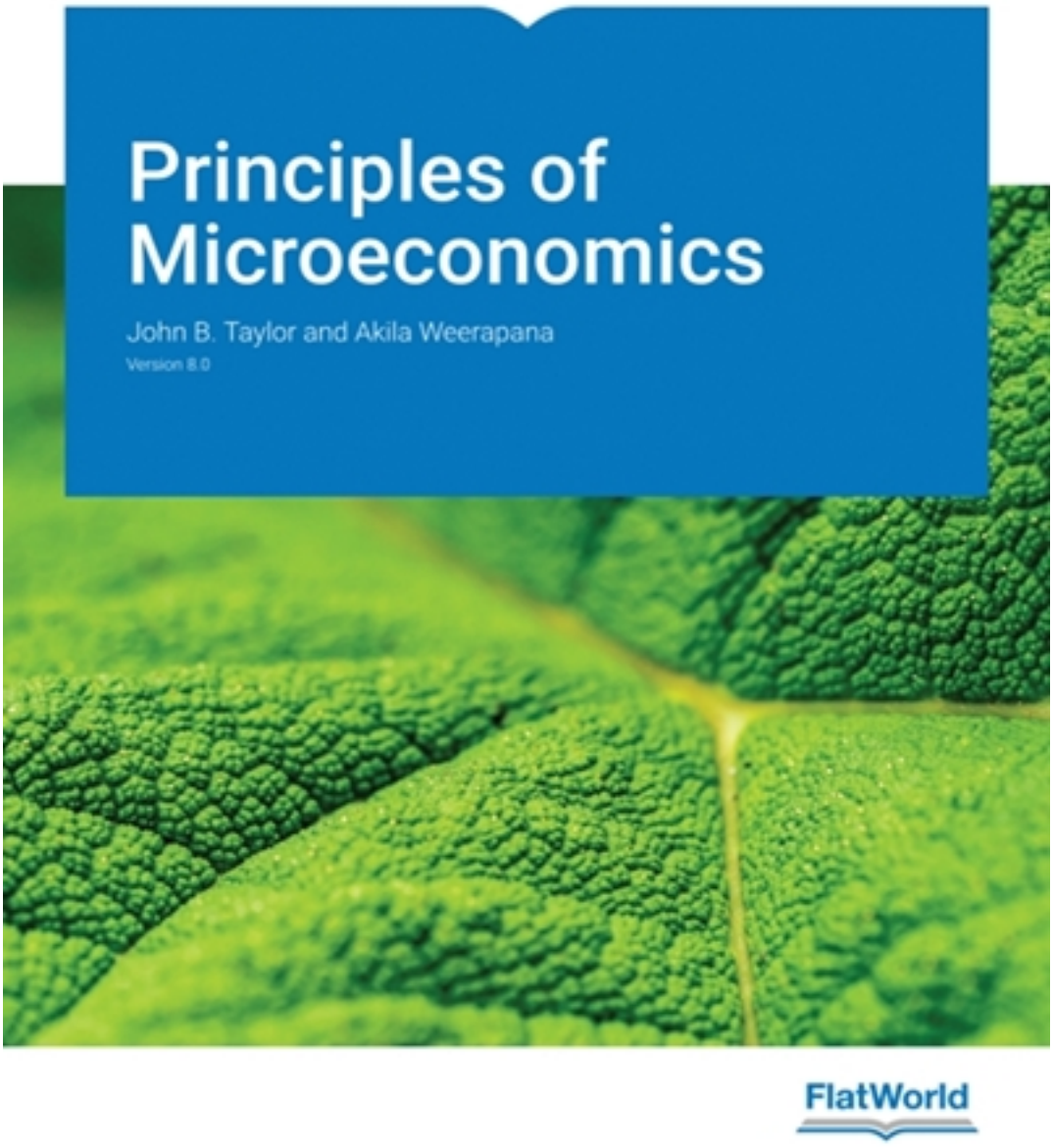


Test Bank

Chapter 2

Observing and Explaining the Economy

Multiple Choice

1. All of the following are what economists commonly do *except*
   a. describing economic events.
   b. explaining why economic events occur.
   c. predicting some economic events.
   d. finding ways to eliminate scarcity in resources.
   e. making recommendations for economic policy.

   d; Moderate

   OBJ: factual
   SEC: 0. Observing and Explaining the Economy
   TOP: Economics
   MSC: Bloom's: Knowledge

2. Which of the following is *not* an economic issue?
   a. Why is college tuition so high?
   b. Why has health-care spending increased faster than the rest of the economy?
   c. How can one earn $1 million without doing anything?
   d. How can one reduce the currently high levels of unemployment in Europe?
   e. Why are there so many brands of bottled water?

   c; Moderate

   OBJ: factual
   SEC: 0. Observing and Explaining the Economy
   TOP: Economics
   MSC: Bloom's: Analysis | AACSB: Analytic

True/False Questions

3. Explaining why the vehicle miles traveled per person have risen in recent years is one example of what economists do.
   True; Basic

   OBJ: factual
   SEC: 0. Observing and Explaining the Economy
   TOP: Economics
   MSC: Bloom's: Knowledge

Multiple Choice Questions

4. To see whether the price of gasoline has risen compared to the prices of other goods and services, one would calculate
   a. gasoline spending divided by spending on all other goods and services.
   b. gasoline spending divided by total consumer spending.
   c. the trend in the price of gasoline.

d. the price of gasoline divided by the overall price level.
e. the price of gasoline divided by the rate of inflation.

d; Basic

OBJ: factual
SEC: 0. Observing and Explaining the Economy
TOP: Relative Price
MSC: Bloom's: Knowledge

True/False Questions

5. The relative price of gasoline has decreased since 2012 because we have paid more dollars for each gallon of gasoline.
False; Moderate

OBJ: factual
SEC: 0. Observing and Explaining the Economy
TOP: Relative Price
MSC: Bloom's: Knowledge

6. Economic data always give an accurate picture of what affects consumers.
False; Basic

OBJ: factual
SEC: 0. Observing and Explaining the Economy
TOP: Data Limitations
MSC: Bloom's: Knowledge

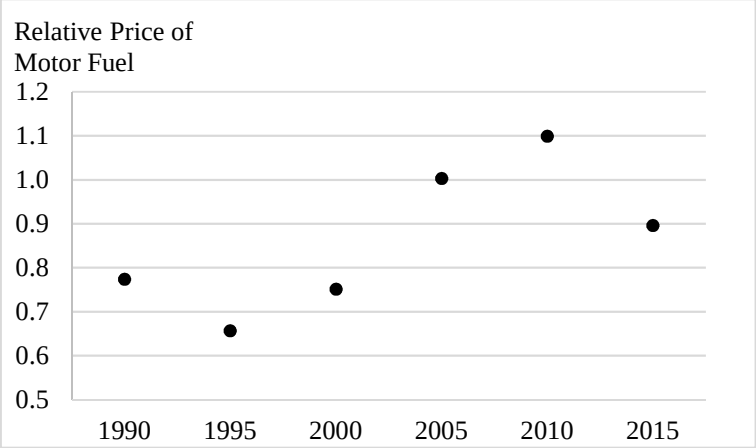
Short Answer Questions

7. The table shows the price of motor fuel (mainly gasoline) and the overall price level (the consumer price index) in five-year intervals over the period 1990 through 2015.

Year	Motor Fuel Price	Overall Price Level
1990	101.1	130.7
1995	99.9	152.4
2000	129.3	172.2
2005	195.8	195.3
2010	239.7	218.1
2015	212.3	237.0

(A) Plot a diagram of the relative price of motor fuel for the 1990-2015 period.
(B) Explain what has been happening to the relative price of motor fuel over this period.

ANSWER:
(A) The plot of the diagram is shown in the figure below.



(B) Refer to the figure shown in answer part (A). The relative price of gasoline increased between 1995 and 2010 and then declined. Notice how the relative price of gasoline in 2015 was close to its relative price in 2000.

Challenging

OBJ: conceptual
SEC: 0. Observing and Explaining the Economy
TOP: Relative Price
MSC: Bloom's: Application | AACSB: Analytic

Multiple Choice Questions

8. The relative price of an iPhone is
   a. the actual price that a consumer pays for the iPhone.
   b. the actual price that the seller received for the iPhone.
   c. the actual price of the iPhone compared with its suggested retail price.
   d. the price of the iPhone compared with the average price of all goods and services.
   e. zero if it is a used iPhone.

   d; Moderate

   OBJ: conceptual
   SEC: 1. Why has Driving Shifted into Reverse
   TOP: Relative Price
   MSC: Bloom's: Application | AACSB: Analytic

9. If the price of gasoline decreases but not as much as the decrease in the average price of other goods and services, then the relative price of gasoline
   a. cannot be determined.
   b. decreases.
   c. remains the same.
   d. increases.
   e. increases or decreases, depending on the price of automobiles.

   d; Moderate

   OBJ: conceptual
   SEC: 1. Why has Driving Shifted into Reverse
   TOP: Relative Price

MSC: Bloom's: Application | AACSB: Analytic

10. If we observe that the amount of vehicle miles traveled rises after the price of gasoline rises, then we can conclude that
    a. the amount of vehicle miles traveled and the price of gasoline are positively correlated.
    b. the amount of vehicle miles traveled and the price of gasoline are negatively correlated.
    c. the amount of vehicle miles traveled causes the price of gasoline to go up.
    d. the price of gasoline causes the amount of vehicle miles traveled to go up.
    e. a negative causation occurs between the amount of vehicle miles traveled and the price of gasoline

    a; Moderate

    OBJ: conceptual
    SEC: 2. Variables, Correlation and Causation
    TOP: Correlation
    MSC: Bloom's: Analysis | AACSB: Analytic

11. An economic variable is any economic measure that
    a. has different values because of researchers' different perspectives.
    b. has no market value.
    c. has a fixed value over time.
    d. has no effect on the economy.
    e. can vary over a range of values.

    e; Basic

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: variables
    MSC: Bloom's: Knowledge

12. All of the following are examples of an economic variable *except*
    a. the amount of income tax that a household has to pay.
    b. a family's income.
    c. the price of gasoline.
    d. an integer 24.
    e. the number of oil refineries in the United States.

    d; Moderate

    OBJ: conceptual
    SEC: 2. Variables, Correlation and Causation
    TOP: variables
    MSC: Bloom's: Analysis | AACSB: Analytic

13. Two variables are correlated if
    a. they both move up or down at about the same time.
    b. an increase in one variable only causes another variable to increase.
    c. a fall in one variable only causes another variable to fall.
    d. there is no observable pattern in the changes of the two variables over time.
    e. changes in one variable do not cause changes in the other.

    a; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation
MSC: Bloom's: Knowledge

14. Causation
    a. occurs when there is no correlation between variables.
    b. occurs when two variables are correlated.
    c. means one event brings about another event.
    d. means one event is observed to occur along with another.
    e. means one event occurs subsequently to another event.

    c; Basic

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Causation
    MSC: Bloom's: Knowledge

15. In order to determine a causation between a change in the price of iPhones and the amount of iPhones purchased by customers, an economist must show that
    a. there is no correlation between the price of iPhones and the quantity of iPhones purchased.
    b. the change in the quantity of iPhones purchased occurs after the change in the price of iPhones.
    c. the change in the price of iPhones occurs along with the change in the quantity of iPhones purchased.
    d. the changes in the price and quantity of iPhones purchased always move in the same direction.
    e. the change in the price of iPhones brings about the change in the quantity of iPhones purchased.

    e; Moderate

    OBJ: conceptual
    SEC: 2. Variables, Correlation and Causation
    TOP: Causation
    MSC: Bloom's: Analysis | AACSB: Analytic

16. To determine causality in many sciences such as physics, researchers
    a. check for correlation.
    b. use scatter diagrams.
    c. perform controlled experiments.
    d. plot the variables against time or location.
    e. use only a small amount of data.

    c; Basic

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Controlled Experiments
    MSC: Bloom's: Knowledge

17. Controlled experiments are
    a. seldom used in economics because economists do not like to repeat experiments.
    b. often used because controlling other factors is relatively easy in economics.

c. not used as widely in economics as in other disciplines.
d. often used in economics.
e. performed by the government to collect economic data.

c; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Controlled Experiments
MSC: Bloom's: Knowledge

18. Experimental economics
a. is the most common method in economics.
b. does not exist.
c. uses laboratory experiments to analyze economic behavior.
d. is the method used by most economists to analyze individuals' economic behavior.
e. is the method used by the government to collect economic data.

c; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Experimental Economics
MSC: Bloom's: Knowledge

True/False Questions

19. If two variables are correlated, then it must be true that one of the variables causes the other.
False; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation versus Causation
MSC: Bloom's: Knowledge

20. It has been documented that beer consumption rises when the unemployment rate rises. To conclude that this correlation means that increased unemployment causes increased beer consumption is to mistake correlation for causality.
True; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation versus Causation
MSC: Bloom's: Analysis | AACSB: Analytic

21. Economics has always been a good example of an experimental science.
False; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Experimental Economics
MSC: Bloom's: Knowledge

Short Answer Questions

22. What is the difference between correlation and causality?

ANSWER:
Correlation means that one event is observed to occur with another; causality means that if one event occurs, it will result in the occurrence of another event.
Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation and Causality
MSC: Bloom's: Knowledge

23. Explain why it is more difficult to determine causality in economics than in other sciences such as physics, chemistry, and biology.

ANSWER:
Repeated, controlled experiments are often used to determine causality. Doing a controlled experiment requires controlling other factors. This is difficult to do in economics because of the complexity of economic phenomena such as fiscal policy or health care and because of the inability to repeat the policy in a real-world setting.
Challenging

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Controlled Experiments
MSC: Bloom's: Analysis | AACSB: Analytic

Multiple Choice Questions

24. Economic models
    a. are not complicated because the behavior they describe is not complicated.
    b. require either algebra or graphs.
    c. are complicated because human behavior is complicated.
    d. are simplifications of the phenomena they attempt to explain.
    e. need to be the same as the phenomena they describe.

d; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Knowledge

25. Economic models
    a. are different from the phenomena they attempt to explain.
    b. are new phenomena because they are by-products of experimental economics.
    c. are not complicated because the behavior they describe is not complicated.
    d. are complicated because human behavior is complicated.
    e. would not be needed if controlled experiments were used more often.

a; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation

TOP: Economic Models
MSC: Bloom's: Knowledge

26. Economic models differ from those in the physical sciences because
    a. they are usually more difficult than models in the physical sciences.
    b. economics has nothing to do with anything physical.
    c. they are less difficult than those in the physical sciences.
    d. they attempt to explain human behavior.
    e. economics relies on controlled experiments.

    d; Basic

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Economic Models
    MSC: Bloom's: Knowledge

True/False Questions

27. Economic models need to resemble, as much as possible, the phenomena being explained.
    False; Moderate

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Economic Models
    MSC: Bloom's: Knowledge | AACSB: Analytic

28. An economic model is a tool used to help us understand the real world.
    True; Basic

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Economic Models
    MSC: Bloom's: Knowledge

29. An economic model is the same as a theory.
    True; Basic

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Economic Models
    MSC: Bloom's: Knowledge

30. A model gives the most realistic description of the real world.
    False; Moderate

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Economic Models
    MSC: Bloom's: Knowledge

Multiple Choice Questions

31. Macroeconomics is concerned primarily with

a. the economy as a whole.
b. the operation of a particular firm.
c. individual consumer behavior.
d. the labor market.
e. a detailed examination of how price and output decisions are made in specific markets.

a; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Macroeconomics
MSC: Bloom's: Knowledge

32. Which of the following is most likely a microeconomic concept?
a. Concern over simultaneous high rates of inflation and unemployment
b. Price determination in the market of consumer goods
c. The rate of economic growth
d. Concern over an entire economy's balance of payments
e. How the composition of output is determined in an economy

b; Challenging

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Microeconomics
MSC: Bloom's: Evaluation | AACSB: Analytic

33. Which of the following is considered a macroeconomic question?
a. How to reduce costs in the healthcare industry?
b. What is the impact of competition on the profits of Apple, the maker of iPhones?
c. How can economic policy increase a nation’s gross domestic product?
d. How does a family allocate income among different types of goods and services?
e. What factors determine the wage rate in the steel industry?

c; Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Macroeconomics
MSC: Bloom's: Evaluation | AACSB: Analytic

True/False Questions

34. Macroeconomics deals with large industries such as the health-care industry.
False; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation T
OP: Macroeconomics
MSC: Bloom's: Analysis | AACSB: Analytic

35. A microeconomic model must be much smaller in size than a macroeconomic model.
False; Moderate

OBJ: factual

SEC: 2. Variables, Correlation and Causation
TOP: Macro- and Micro-Economics
MSC: Bloom's: Evaluation | AACSB: Analytic

Multiple Choice Questions

36. Two variables are negatively correlated if
a. the value of one variable decreases as the value of the other variable decreases.
b. the value of one variable increases as the value of the other variable decreases.
c. a fall in one variable only causes another variable to fall.
d. changes in one have no effect on the other.
e. the value of one variable remains constant as the value of another variable changes.

b; Moderate

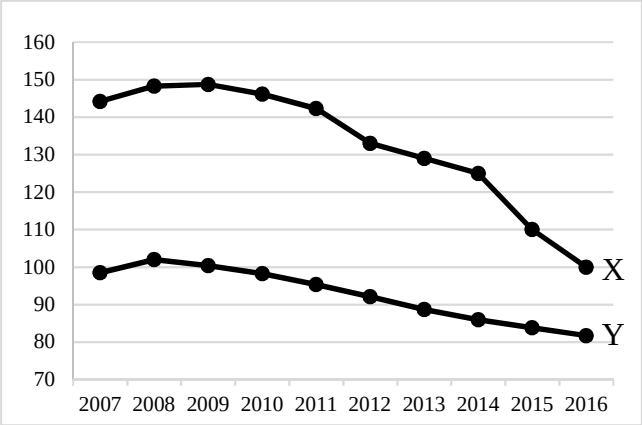
OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation
MSC: Bloom's: Knowledge

37. When economists explain the relationship between the price of hotdogs and the number that consumers will buy, the *ceteris paribus* assumption implies that
a. the price of hotdogs is constant.
b. the quantity of hotdogs purchased is constant.
c. both the price and quantity of hotdogs purchased are constant.
d. factors other than the price and quantity of hotdogs purchased are constant.
e. everything in the world does not change.

d; Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Analysis | AACSB: Analytic

Exhibit 2-1



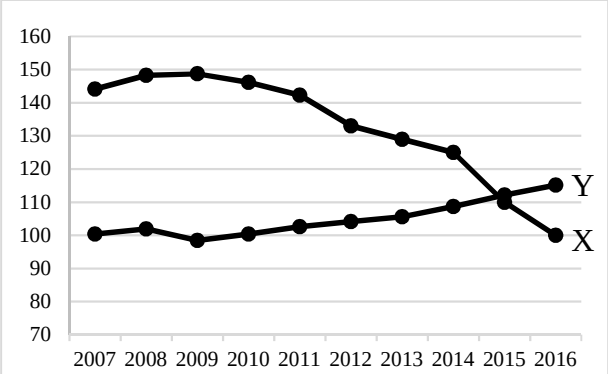
38. Exhibit 2-1 shows movements of two variables, *X* and *Y*, from 2007 through 2016. From this diagram the most one can conclude is that
a. *X* and *Y* are positively correlated with each other.

b. *X* and *Y* are negatively correlated with each other.
c. *X* and *Y* are positively correlated with each other and either *X* causes *Y* or *Y* causes *X*.
d. we cannot say anything about how *X* and *Y* are related because we do not know the units of measurement for *X* and *Y*.
e. *X* and *Y* are not correlated with each other.

a; Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation
MSC: Bloom's: Analysis | AACSB: Application of Knowledge

Exhibit 2-2



39. Exhibit 2-2 shows the relationship between *X* and *Y* between 2007 and 2016. Suppose this correlation between *X* and *Y* continues to hold for the next 10 years. If *Y* declines over the period 2017 through 2020, we would expect
a. *X* to fall over the same period because *X* and *Y* are negatively correlated.
b. *X* to increase over the same period because *X* and *Y* are positively correlated.
c. *X* to increase over the same period because *X* and *Y* are negatively correlated.
d. the correlation to be unknown because we do not know the units of measurement for *X* and *Y* and thus cannot say anything about how *X* and *Y* are related.
e. *X* to fall over the same period because *X* and *Y* are positively correlated.

c; Moderate

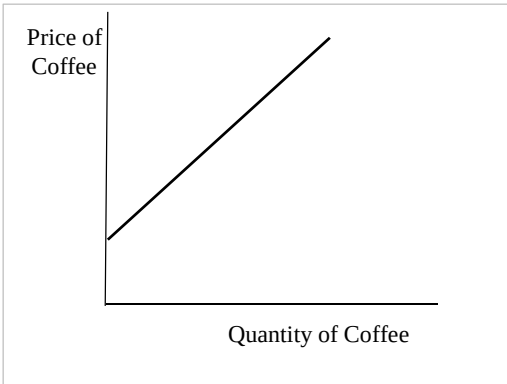
OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation
MSC: Bloom's: Application | AACSB: Application of Knowledge

40. If the quantity demanded of coffee increases when the price of coffee declines, then these two ____ are ____.
a. variables; negatively related
b. constants; positively related
c. variables; positively related
d. constants; negatively related
e. variables; not related

a; Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Relationship between Variables
MSC: Bloom's: Application | AACSB: Analytic

Exhibit 2-3



41. Exhibit 2-3 shows two variables that are
    a. constant.
    b. positively related.
    c. negatively related.
    d. not related.
    e. both positively and negatively related.

    b; Basic

    OBJ: conceptual
    SEC: 2. Variables, Correlation and Causation
    TOP: Economic Models
    MSC: Bloom's: Application | AACSB: Analytic

42. In Exhibit 2-3, an example of a constant would be
    a. the quantity of coffee supplied.
    b. the price that corresponds to any quantity of coffee supplied.
    c. the price of coffee.
    d. the slope of the line.
    e. both the price and quantity of coffee.

    d; Challenging

    OBJ: factual
    SEC: 2. Variables, Correlation and Causation
    TOP: Constants
    MSC: Bloom's: Analysis | AACSB: Analytic

43. In Exhibit 2-3, an example of a variable would be the
    a. price of coffee.
    b. intercept.
    c. relationship that shows by how many units the supply of coffee will change for any unit change in the price of coffee.
    d. slope of the line.
    e. price at which the supply of coffee is zero.

a; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Variables
MSC: Bloom's: Application | AACSB: Analytic

44. *Ceteris paribus* means
    a. that rational self-interest is being assumed.
    b. "all variables are independent."
    c. that no other assumptions are being made.
    d. "other things being equal."
    e. "all relationships are inverse."

d; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Knowledge

45. The *ceteris paribus* assumption is used in economics
    a. because economic theory is an accurate reflection of the real world.
    b. to isolate the important variables when formulating a theory.
    c. primarily to identify unstable equilibrium situations.
    d. to make the theory more complicated
    e. to distinguish economics from other disciplines.

b; Challenging

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Knowledge

46. In describing the relationship between X and Y, the *ceteris paribus* assumption implies that
    a. the value of X does not change.
    b. the value of Y does not change.
    c. the values of both X and Y do not change.
    d. all other factors that may affect X and Y are constant.
    e. nothing in the world can change.

d; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Knowledge

True/False Questions

47. The *ceteris paribus*, or everything else held constant, assumption is used in economics primarily to identify unstable equilibrium situations.
    False; Basic

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Knowledge | AACSB: Analytic

48. The *ceteris paribus* assumption is always used whenever an economist analyzes the relationship of two variables.
True; Basic

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Knowledge

Multiple Choice Questions

49. Economists are likely to evaluate the impacts of rising gasoline prices through the use of
a. outdated models with new applications.
b. models that are not relevant to the healthcare industry.
c. existing models that are useful for explaining observations.
d. models that are useful only for exposition in economics textbooks.
e. new models with old data.

c; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Analysis | AACSB: Analytic

50. A major reason for the development of new models is
a. because of asymmetric information.
b. that new observations cannot be explained by existing models.
c. that old economic laws are often repealed.
d. that human behavior is no longer important.
e. that new models are always easier to understand.

b; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Knowledge

51. A model is valid
a. if it is based on human behavior.
b. if it is new.
c. if it has been around for many years.
d. if it can explains some observations or events.
e. only if it makes predictions perfectly.

d; Moderate

OBJ: factual

SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Evaluation | AACSB: Analytic

52. A hypothesis is
a. an alternative to using models.
b. a testable statement used to explain observations.
c. an untestable explanation used to explain observations.
d. a fact.
e. the same as a theory.

b; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Hypothesis
MSC: Bloom's: Knowledge

True/False Questions

53. Economists develop new models only when new economic data become available.
False; Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Analysis | AACSB: Analytic

Short Answer Questions

54. Explain how economic models are similar to and different from models used in other sciences. What are the consequences of these differences?

ANSWER:
Acceptable answers will mention that economic models are similar because they are abstractions or simplifications. Moreover, when it comes to real-world applications, many models are at best good approximations.

Economic models differ from other scientific models, especially models in the physical sciences, because they are based on human behavior. The consequence of this is that the approximations of these models are not as good as models in the physical sciences.
Challenging

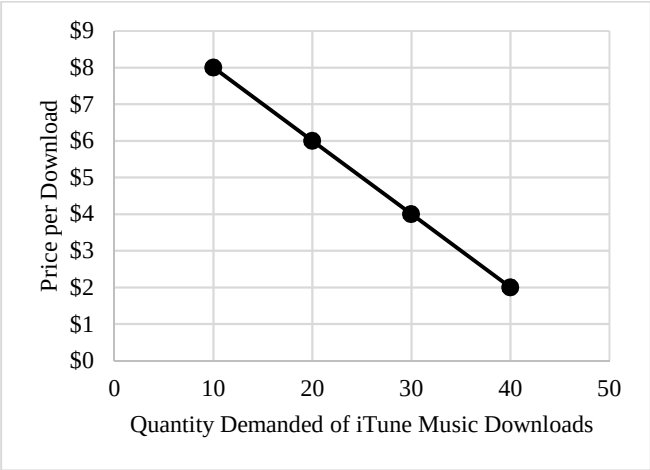
OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Knowledge | AACSB: Analytic

55. What is the difference between microeconomics and macroeconomics?

ANSWER:
Microeconomics studies the behavior of individual firms, households, or specific markets. Macroeconomics focuses on the economy as a whole and is concerned with the topics associated with national income, unemployment, and the price level.

Basic
OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Macro- and Micro-Economics
MSC: Bloom's: Analysis | AACSB: Analytic

56. The figure below shows the relationship of the quantity demanded for iTune music downloads per day to the price of each iTune music download.



(A) If the price of iTune music downloads increases from $2 per download to $4 per download, by how much will the quantity demanded for iTune music downloads change?
(B) Explain how your answer in part (A) relies on the *ceteris paribus* assumption.

ANSWER:
(A) The number of iTune music downloads will decrease from 40 downloads per day to 30 downloads per day. This is a decline of 10 downloads.
(B) Any realistic answer will do. For example, the answer in part (A) will not be valid if some songs are posted online free for anyone to listen.
Challenging

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Application | AACSB: Application of Knowledge

57. Explain how new models or theories are developed in economics.

ANSWER:
First, a hypothesis based on this new model or theory is developed to explain an observation. Then the hypothesis is tested to determine if it is capable of predicting other observations. If the hypothesis passes the test, then it becomes accepted.
Moderate

OBJ: factual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Knowledge

Multiple Choice Questions

58. Economics was originally called
    a. political engineering.
    b. political economy.
    c. economic physics.
    d. social engineering.
    e. social physics.

    b; Basic

    OBJ: factual
    SEC: 3. Recommending Appropriate Policies
    TOP: Political Economy
    MSC: Bloom's: Knowledge

59. Those who support a *laissez faire* system
    a. believe in the working of socialism.
    b. argue for a market economy.
    c. support government intervention.
    d. argue for a command economy.
    e. argue for a mixed economy.

    b; Basic

    OBJ: factual
    SEC: 3. Recommending Appropriate Policies
    TOP: Laissez Faire Systems
    MSC: Bloom's: Knowledge

60. A market economy in which the government plays some role is called
    a. capitalism.
    b. socialism.
    c. communism.
    d. a *laissez faire* system.
    e. a mixed economy.

    e; Basic

    OBJ: factual
    SEC: 3. Recommending Appropriate Policies
    TOP: Mixed Economies
    MSC: Bloom's: Knowledge

61. A system in which the government essentially owns and controls all production is called
    a. capitalism.
    b. socialism.
    c. a market system.
    d. a *laissez faire* system.
    e. a mixed economy.

    b; Basic

    OBJ: factual

SEC: 3. Recommending Appropriate Policies
TOP: Socialism
MSC: Bloom's: Knowledge

62. Karl Marx argued that capitalism would eventually collapse and give rise to a new economic system, which is called
a. a political system.
b. socialism.
c. a market system.
d. a *laissez faire* system.
e. a mixed economy.

b; Basic

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Socialism
MSC: Bloom's: Knowledge

True/False Questions

63. A *laissez faire* system is an economy with many government regulations.
False; Basic

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Laissez Faire Systems
MSC: Bloom's: Knowledge

64. A mixed system is an economy with only private industries.
False; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Mixed Economies
MSC: Bloom's: Knowledge

65. In modern market economies, the role government is small.
False; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Market Economies
MSC: Bloom's: Evaluation

Multiple Choice Questions

66. Which of the following statements is *true*?
a. Normative economics deals with what is.
b. Normative economics expresses someone's opinion.
c. Positive economics is subjective.
d. Positive economics deals with what ought to be.
e. Normative economics tries to refrain from opinions.

b; Moderate
OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Knowledge

67. The category of economics that contains statements about what ought to be is known as
a. objective economics.
b. positive economics.
c. normative economics.
d. microeconomics.
e. macroeconomics.

c; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Knowledge

68. Positive economics is the
a. study of the desirable attributes of economic relationships.
b. scientific study of "what is" among economic relationships.
c. scientific study of how people behave positively.
d. study of how economic policy should improve the welfare of individuals.
e. study of how people and institutions should behave.

b; Challenging

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Positive Economics
MSC: Bloom's: Knowledge

69. Positive economics
a. will usually indicate which economic policy is best.
b. is concerned with what ought to be.
c. is the same as normative economics.
d. is strictly quantitative and so has little to say to those with philosophical goals to achieve in policymaking.
e. produces verifiable statements.

e; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Positive Economics
MSC: Bloom's: Knowledge

70. Whether a nation should have more or less government involvement is basically a
a. normative issue.
b. positive issue.
c. political issue, and therefore the techniques of economic analysis are not applicable.
d. positive or normative issue; it could be either.
e. both normative and positive issues.

a; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Application | AACSB: Application of Knowledge

71. A newspaper editorial explaining what should be done to reduce the national debt is an example of
a. the *ceteris paribus* assumption.
b. microeconomics.
c. functional economics.
d. positive economics.
e. normative economics.

e; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Application | AACSB: Analytic

72. "Inflation is a more serious problem than unemployment." This statement is an example of
a. a normative statement.
b. the fallacy of composition.
c. a positive statement.
d. microeconomics.
e. macroeconomics.

a; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Application | AACSB: Analytic

73. "Inflation is currently 2 percent in the United States." This statement is an example of
a. a positive statement.
b. a normative statement.
c. the fallacy of composition.
d. macroeconomics.
e. microeconomics.

a; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Positive Economics
MSC: Bloom's: Application | AACSB: Analytic

74. Which of the following is a normative statement?
a. "Income inequality in the United States has increased."
b. "The Federal Reserve has observed rising inflation."
c. "The government should increase the minimum wage to help low-income groups."
d. "The minimum wages are higher in some cities than in other cities."

e. "The relative price of gasoline has remained low in the past 30 years."

c; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Application | AACSB: Analytic

True/False Questions

75. A positive statement is necessarily a subjective statement.
False; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Positive Economics
MSC: Bloom's: Analysis | AACSB: Analytic

76. All microeconomic issues are normative in nature.
False; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Normative Economics
MSC: Bloom's: Analysis | AACSB: Analytic

Multiple Choice Questions

77. Economics
a. can only be used objectively.
b. cannot be practiced as a science unless it uses controlled experiments.
c. is always practiced as a science.
d. is not always used objectively.
e. can never be used objectively.

d; Basic

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Economics as a Partisan Tool
MSC: Bloom's: Knowledge

78. To argue that economics is the only science not used objectively is
a. true because only economics engages in politically controversial issues.
b. false because other sciences besides economics engage in politically controversial issues.
c. true because all other sciences use controlled experiments.
d. false because one's reasoning is either correct or incorrect.
e. false because none of the other sciences use controlled experiments.

b; Basic

OBJ: factual
SEC: 3. Recommending Appropriate Policies

TOP: Economics as a Partisan Tool
MSC: Bloom's: Knowledge

79. To argue that economics is a partisan policy tool means that
a. economics is being used without political considerations.
b. part of the policy is based on economic analysis.
c. economics is not always used objectively.
d. economics is used objectively.
e. economic analysis is always misleading.

c; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Economics as a Partisan Tool
MSC: Bloom's: Knowledge | AACSB: Analytic

True/False Questions

80. In his book *Wealth of Nations*, Adam Smith made a positive statement when he advocated about what the government should or should not do to affect an economy.
False; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Positive Economics
MSC: Bloom's: Evaluation | AACSB: Analytic

Multiple Choice Questions

81. For policy decisions to be useful,
a. political issues need to be taken into consideration along with economic issues.
b. economics is the only factor for consideration.
c. economics usually is of little help.
d. economic analysis is seldom sought.
e. economic data must be falsified.

a; Moderate

OBJ: conceptual
SEC: 3. Recommending Appropriate Policies
TOP: Policy Issues
MSC: Bloom's: Analysis | AACSB: Analytic

Short Answer Questions

82. Considering the role government plays, what term best describes the U.S. economy? Why?

ANSWER:
The U.S. economy is a mixed economy. Even though most prices of goods and services transacted in this economy are determined by market forces, the government still plays a large role.
Moderate

OBJ: conceptual

SEC: 3. Recommending Appropriate Policies
TOP: Mixed Economies
MSC: Bloom's: Knowledge | AACSB: Analytic

83. Using gasoline prices as an example, explain what a normative statement is and what a positive statement is.

ANSWER:
Valid positive statements would include "Gasoline prices have gone up due to an increase in gasoline demand" or "The relative price of gasoline has been rising."

Valid normative statements would include "The government should control the increases in gasoline prices" or "Oil companies should not make so much profit by keeping gasoline prices high."
Moderate

OBJ: conceptual
SEC: 3. Recommending Appropriate Policies
TOP: Positive versus Normative Economics
MSC: Bloom's: Application | AACSB: Analytic

Multiple Choice Questions

84. When people survey economists' beliefs, they find
a. a surprising amount of agreement.
b. that economists act as if they are not human.
c. that economists lack moral beliefs.
d. that, for every economist, they get two different answers.
e. more disagreement than expected.

a; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Knowledge

85. A good explanation for why people believe economists always disagree is that
a. economics is not a science.
b. this is the impression economists want the public to have of them.
c. with so many economists, it is always possible to find an economist with a different viewpoint.
d. economics is an inexact science.
e. economists are trained to argue with others.

c; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Knowledge

86. When economists do disagree, the disagreement most likely concerns
a. positive issues.
b. normative issues.

c. theoretical issues.
d. minor issues.
e. just about any economic topic.

b; Challenging

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Analysis | AACSB: Analytic

87. Because economists have varying moral beliefs and different views of the world,
a. it is impossible for there to be anything scientific about economics.
b. they will disagree on abstract issues.
c. there are many different types of economic theories.
d. they will agree more often than not on principles when discussed at an abstract level, but they will disagree on whether to apply these principles in real-world circumstances.
e. economics can never be a science.

c; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Knowledge | AACSB: Analytic

True/False Questions

88. Most disagreements between economists occur because of different data sources.
False; Moderate

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Knowledge

89. There is total agreement in economics among economists and policymakers.
False; Basic

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Knowledge

Short Answer Questions

90. Explain how the distinction between positive and normative economics provides insight as to why economists do disagree.

ANSWER:
In the abstract, economists are often in agreement. Usually this involves positive economics. However, issues such as morality and partisanship usually shape how an economist believes the world ought to be. This is the concern of normative economics. In other words, the disagreement is not over what will happen (positive) if a policy is implemented but whether a policy should be implemented (normative).

Challenging

OBJ: factual
SEC: 3. Recommending Appropriate Policies
TOP: Disagreement between Economists
MSC: Bloom's: Analysis | AACSB: Analytic

91. Explain why there is the popular impression that economists seldom agree with each other.

ANSWER:
First, even if 99 percent of the economics profession agrees with an issue, it is always possible for a news show to find an economist who represents the 1 percent that does not.

In addition, economists are human beings with different moral and philosophical beliefs about what should happen in the world, unrelated to economic models. Consequently, even if economists agree on abstract theory, their different moral and philosophical beliefs cause them to disagree with respect to policy.
Moderate

OBJ: conceptual
SEC: 3. Recommending Appropriate Policies
TOP: Consensus among Economists
MSC: Bloom's: Knowledge | AACSB: Analytic

Multiple Choice Questions

92. Economic analysis
a. requires few verbal skills.
b. requires both quantitative and analytical skills.
c. is based solely on analytical models.
d. has little use for a historical or philosophical background.
e. has little use for mathematics.

b; Basic

OBJ: factual
SEC: 4. End-of-Chapter Material
TOP: Scope of Economics
MSC: Bloom's: Knowledge

93. Studying economics will provide you with tools that are
a. mainly useful for understanding business issues.
b. useless in real-world situations.
c. mainly useful for financial analysis.
d. not useful for studying issues such as crime, discrimination, and who has the right to sue.
e. useful for studying issues such as monetary policy, discrimination, and who has the right to sue.

e; Basic

OBJ: factual
SEC: 4. End-of-Chapter Material
TOP: Scope of Economics
MSC: Bloom's: Knowledge

94. Economics is a study that
    a. is never relevant to people's lives.
    b. cannot be enjoyed if economic models fail to explain the real world.
    c. exists only to provide employment for economists.
    d. can be enjoyed independent of its relevance to society.
    e. can be enjoyed as long as its analysis is scientific.

    d; Basic

    OBJ: factual
    SEC: 4. End-of-Chapter Material
    TOP: Scope of Economics
    MSC: Bloom's: Knowledge

True/False Questions

95. Knowledge of economics will help you make better decisions about education, employment, and investments.
    True; Basic

    OBJ: conceptual
    SEC: 4. End-of-Chapter Material
    TOP: Scope of Economics
    MSC: Bloom's: Knowledge

96. Economics is mainly concerned with financial issues.
    False; Basic

    OBJ: factual
    SEC: 4. End-of-Chapter Material
    TOP: Scope of Economics
    MSC: Bloom's: Knowledge | AACSB: Analytic

97. Economics requires more of a mixture of verbal and quantitative skills than other sciences.
    True; Basic

    OBJ: factual
    SEC: 4. End-of-Chapter Material
    TOP: Economic Skills
    MSC: Bloom's: Knowledge

Short Answer Questions

98. Explain why economics requires historical and philosophical skills in addition to analytical skills.

    ANSWER:
    Some questions involve a direct answer and require an analytical method to solve them. Other questions are more open-ended, requiring an historical and/or philosophical perspective to answer them.
    Moderate

    OBJ: factual
    SEC: 4. End-of-Chapter Material
    TOP: Required Skills

MSC: Bloom's: Knowledge | AACSB: Analytic

99. Identify whether the following issues are macroeconomic or microeconomic and explain why you categorized them in that way.
(A) The growth rate of real GDP
(B) A government policy that guarantees a minimum price of agricultural goods
(C) A tax on restaurant meals
(D) A government policy to affect the increase in the overall price level

ANSWER:
(A) Macroeconomic issue because it concerns the whole economy
(B) Microeconomic issue because this government policy affects a particular industry
(C) Microeconomic issue because the tax affects a particular industry
(D) Macroeconomic issue because the government policy affects the overall price level in the economy
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Macro- and Micro-Economics
MSC: Bloom's: Application | AACSB: Analytic

100. Identify whether the following statements are positive or normative economic statements, and explain why you categorized them in that way.
(A) "The best way to improve the economic situation would be to decrease the unemployment rate by decreasing the interest rate."
(B) "The government increased taxes in order to decrease the budget deficit and improve economic growth."
(C) "Taxes on businesses decreased production in some industries in the short run."
(D) "The government should pursue a low-inflation policy by restraining the growth of the money supply."

ANSWER:
(A) Normative economic statement expressing an opinion about the best economic policy
(B) Positive economic statement explaining the government's actions
(C) Positive economic statement explaining the effect of tax policy on particular industries
(D) Normative economic statement expressing an opinion about the best monetary policy
Moderate

OBJ: conceptual
SEC: 3. Recommending Appropriate Policies
TOP: Positive and Normative Economics
MSC: Bloom's: Application | AACSB: Analytic

101. Interpret the following data on the relative price of cellphones and answer the following questions.

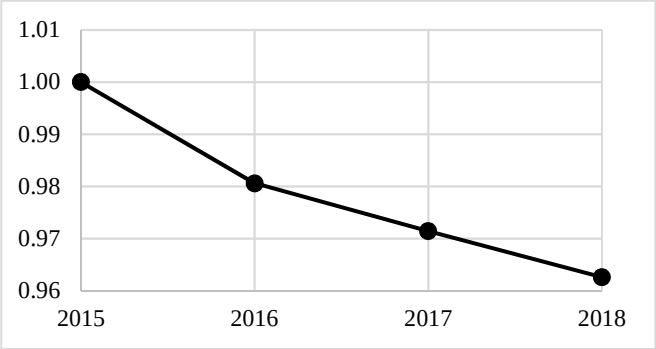
Year	Price of All Goods	Price of Smartphones
2015	100	100
2016	103	101
2017	105	102
2018	107	103

(A) Calculate the relative price of smartphones for each year.
(B) Plot the relative price of smartphones.
(C) What can you say about how the price of smartphones varied in comparison to the price of all goods between 2015 and 2018?

ANSWER:
(A) The relative price of smartphone s for each year is shown in the table below.

Year	Price of All Goods	Price of Smartphones	Relative Price of Smartphones
2015	100	100	1.00
2016	103	101	0.98
2017	105	102	0.97
2018	107	103	0.96

(B)



(C) Because the price of smartphones increased at a slower rate than did the price of all goods, the relative price of smartphones declined over time.
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Working with Data
MSC: Bloom's: Application | AACSB: Application of Knowledge

102. Refer to the information in the following table:

Year	Price of All Goods	Price of Smartphones
2015	100	100
2016	103	101
2017	105	102
2018	107	103

Using the numerical examples in the table, show that the relative price of smartphones can fall on occasions where the price of those goods could be rising, falling, or remaining unchanged.

ANSWER:

The following table shows the prices of smartphones over time in three situations. In case A, the price of smartphones increased but at a slower rate than did the price of all goods. In case B, the price of smartphones decreased over time. In case C, the price of smartphones was constant over time. However, in all three cases, the relative price of smartphones declined over time.

Year	Price of All Goods	Price of Smartphones (Case A)	Price of Smartphones (Case B)	Price of Smartphones (Case C)
2015	100	100	100	100
2016	103	101	99	100
2017	105	102	98	100
2018	107	103	97	100

Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Relative Price
MSC: Bloom's: Application | AACSB: Application of Knowledge

103. Indicate whether you expect positive or negative correlation for the following pairs of variables. For each pair, state whether causation exists.
(A) The use of sunglasses and the number of sunny days.
(B) The number of movie rentals and the number of cable subscriptions.
(C) Purchases of candy and purchases of Valentine's Day cards.

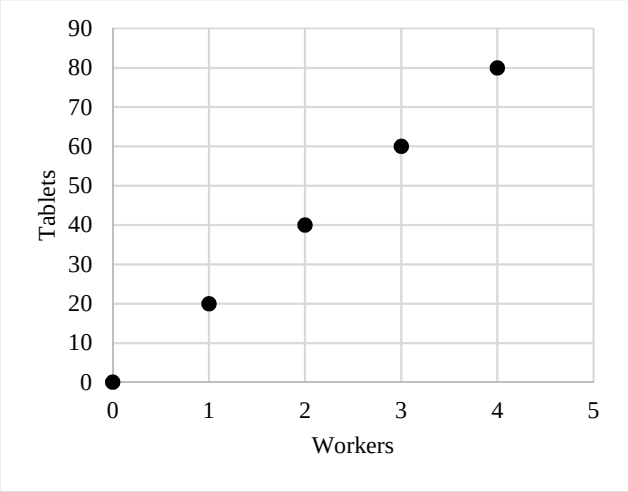
ANSWER:
(A) Positive correlation. The number of sunny days is likely to cause the use of sunglasses.
(B) Negative correlation. It is difficult to say whether the number of movie rentals causes the number of cable subscription, or vice versa.
(C) Positive or negative correlation. It is difficult to say whether one causes another.
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation and Causality
MSC: Bloom's: Application | AACSB: Analytic

104. Consider an economic model of tablet production, which depends on the number of workers. Represent this model graphically, algebraically, and verbally.

Tablets	**Workers**
0	0
20	1
40	2
60	3
80	4

ANSWER:
Graphically:



Algebraically:
Using the information in the table, the relationship between the number of tablets and the number of workers can be expressed as *Tablets* = 20 × *Workers*.

Verbally:
The information in the table indicates a positive and linear relationship between the number of workers and the production of tablets. In other words, as the number of workers increases, the production of tablets also increases.
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Economic Models
MSC: Bloom's: Application | AACSB: Application of Knowledge

105. Suppose you decide to build a model to explain why some companies earned more profits in the past year than others did.
(A) What data would you collect?
(B) What variable do you believe would supply the major part of the explanation of the variation in profits?
(C) If you graph the data with profits on the vertical axis and your explanatory variable on the horizontal axis, will the relationship be upward sloping or downward sloping?
(D) What does your answer in part (C) imply for whether the data on profits and the data on your explanatory variable are positively or negatively correlated?

ANSWER:
(A) I would collect data on company profits and data that can possibly explain variations in profits.
(B) I would look at company sizes.
(C) I expect the relationship between company profits and size to be upward sloping.
(D) An upward sloping relationship implies that company profits and size are positively correlated.
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Correlation
MSC: Bloom's: Application | AACSB: Analytic

106. What problems would arise if economists did not make *ceteris paribus* assumptions when making predictions?

ANSWER:
Without making *ceteris paribus* assumptions, economists would not be able to control or identify the other factors that would alter the outcome of what they are predicting.
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Ceteris Paribus
MSC: Bloom's: Knowledge | AACSB: Analytic

107. Describe an experiment that you would run to see how market prices are determined. Also be sure to explain where the *ceteris paribus* assumption is needed.

ANSWER:
I would run an experiment by dividing a group of people into two, one representing buyers and the other representing sellers. I would find out how the market price changes through their interactions. The *ceteris paribus* assumption is used in order to separate the effects of the market price on the buyers' and sellers' decisions from other factors.
Moderate

OBJ: conceptual
SEC: 2. Variables, Correlation and Causation
TOP: Experimental Economics
MSC: Bloom's: Comprehension | AACSB: Analytic

108. Suppose an economic study shows that increasing the tax rate on alcoholic beverages will reduce the amount of traffic accidents. Which of the following statements can be valid based on the study because they are positive statements, and which cannot be valid because they are normative statements.
(A) "Increasing the tax rate on alcoholic beverages is a method of reducing traffic accidents."
(B) "If the government wishes to reduce traffic accidents, it ought to raise the tax on alcoholic beverages."
(C) "The government should not raise the tax on alcoholic beverages for low-income drinkers."

ANSWER:
(A) Positive statement.
(B) Normative statement.
(C) Normative statement.
Moderate

OBJ: conceptual
SEC: 3. Recommending Appropriate Policies
TOP: Positive and Normative
MSC: Bloom's: Analysis | AACSB: Analytic

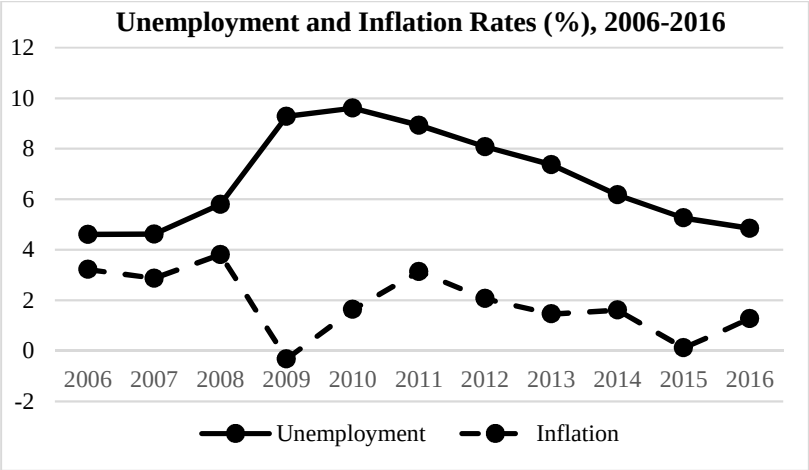
Chapter 2 Appendix—Reading, Understanding, and Creating Graphs

1. A two-dimensional diagram can be represented by the
   a. depth of this page.
   b. length of this page.
   c. surface of this page.
   d. volume of a book.
   e. width of this page.

   c; Moderate

   OBJ: conceptual
   SEC: 4. Appendix: Reading, Understanding and Creating Graphs
   TOP: Graphs
   MSC: Bloom's: Knowledge

   Exhibit 2A-1



2. Exhibit 2A-1 is an example of a
   a. bar chart.
   b. scatter diagram.
   c. pie chart.
   d. time-series plot.
   e. dual-scale diagram

   d; Moderate

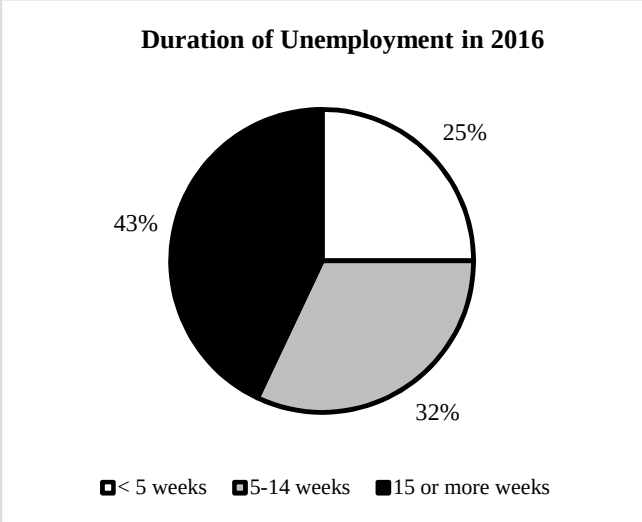
   OBJ: factual
   SEC: 4. Appendix: Reading, Understanding and Creating Graphs
   TOP: Graphs
   MSC: Bloom's: Knowledge

3. According to Exhibit 2A-1, in 2008 the
   a. inflation rate was close to 5 percent, and the unemployment rate was about 7 percent.
   b. unemployment rate and the inflation rate were equal.
   c. inflation rate was close to 6 percent, and the unemployment rate was above 2 percent.
   d. inflation rate was close to 2 percent, and the unemployment rate was close to 6 percent.
   e. inflation rate was above 10 percent, and the unemployment rate was close to 2 percent.

d; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Graphs
MSC: Bloom's: Knowledge

Exhibit 2A-2



4. The type of chart shown in Exhibit 2A-2 is referred to as a
   a. dual-scale diagram.
   b. time-series graph.
   c. bar chart.
   d. pie chart.
   e. scatter diagram.

   d; Basic

   OBJ: factual
   SEC: 4. Appendix: Reading, Understanding and Creating Graphs
   TOP: Pie Charts
   MSC: Bloom's: Knowledge

5. Suppose in 2016, on average, 10 million people were unemployed. According to Exhibit 2A-2, how many of these people had been unemployed for less than five weeks?
   a. 2.5 million
   b. 25 million
   c. 0.25 million
   d. 3.2 million
   e. 32 million

   a; Moderate

   OBJ: conceptual
   SEC: 4. Appendix: Reading, Understanding and Creating Graphs
   TOP: Pie Charts
   MSC: Bloom's: Application | AACSB: Application of Knowledge

6. The slope of an inverse relationship
   a. must be positive.
   b. is calculated by dividing the variable on the horizontal axis by the variable on the vertical axis.
   c. must be negative.
   d. can never be measured.

e. must be constant everywhere along the curve.

c; Moderate

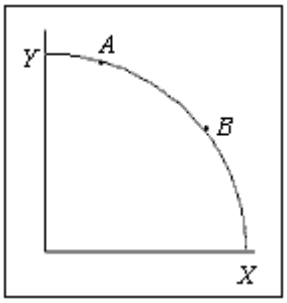
OBJ: factual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Knowledge | AACSB: Analytic

7. An inverse relationship between two variables indicates a
   a. causation.
   b. constant slope.
   c. positive slope.
   d. negative slope.

d; Moderate

OBJ: factual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Knowledge

Exhibit 2A-3



8. In Exhibit 2A-3, the curve shows
   a. a constant relationship.
   b. a direct relationship.
   c. a straight-line relationship.
   d. an inverse relationship.
   e. normative economics.

d; Moderate

OBJ: factual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

9. In Exhibit 2A-3, the curve has a
   a. positive slope with decreasing absolute value.
   b. negative slope with decreasing absolute value.
   c. negative slope with increasing absolute value.
   d. constant negative slope.
   e. positive slope with increasing absolute value.

c; Moderate

OBJ: factual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Knowledge | AACSB: Analytic

10. According to Exhibit 2A-3, which of the following is *true*?
    a. The magnitude of the slope at point *B* is the same as it is at point *A*.
    b. The magnitude of the slope at point *A* is less than the magnitude of the slope at point *B*.
    c. The slope at point *A* is negative, whereas the slope at point *B* is positive.
    d. The magnitude of the slope at point *B* is less than the magnitude of the slope at point *A*.
    e. The magnitude of the slope at point *A* is greater than the magnitude of the slope at point *B*.

    b; Moderate

    OBJ: conceptual
    SEC: 4. Appendix: Reading, Understanding and Creating Graphs
    TOP: Slopes
    MSC: Bloom's: Analysis | AACSB: Analytic

11. A curve shows that every time family income increases by $1, spending increases by $.75. This curve would
    a. have a negative slope with decreasing absolute value.
    b. have a positive slope with increasing absolute value.
    c. have a negative slope with increasing absolute value.
    d. have a positive slope with decreasing absolute value.
    e. be a straight line with a positive slope.

    a; Moderate
    OBJ: conceptual
    SEC: 4. Appendix: Reading, Understanding and Creating Graphs
    TOP: Slopes
    MSC: Bloom's: Application | AACSB: Analytic

12. Suppose a curve shows that every time family income increases by $1, spending increases by $.80. If family income increases by $100, then spending will increase by
    a. $8.
    b. $20.
    c. $80.
    d. $800.
    e. $200.

    c; Moderate

    OBJ: conceptual
    SEC: 4. Appendix: Reading, Understanding and Creating Graphs
    TOP: Slopes
    MSC: Bloom's: Application | AACSB: Application of Knowledge

13. Suppose a curve shows that every time family income increases by $1, spending increases by $.80. If spending increases by $100, then income increased by
    a. $8.
    b. $80.
    c. $100.

d. $125.
e. $12.5.

d; Challenging

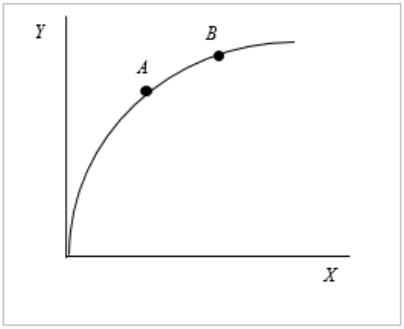
OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Application | AACSB: Application of Knowledge

14. A relationship showing that exam grades are positively related to hours of study can be described by a curve that
a. slopes downward.
b. is horizontal.
c. has a negative slope with increasing absolute value.
d. slopes upward.
e. has a negative slope with decreasing absolute value.

c; Challenging

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

Exhibit 2A-4



15. The curve in Exhibit 2A-4 represents a(n)
a. negative slope.
b. slope that is constant *and* positive.
c. slope that is not constant *and* positive.
d. inverse relationship.
e. slope that is constant.

c; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Knowledge

16. Refer to Exhibit 2A-4. The slope of the relationship between *X* and *Y* is
a. positive.
b. negative.
c. zero.

d. infinity.
e. less than –1.

a; Moderate

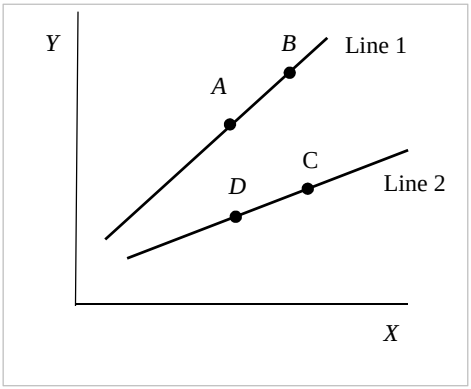
OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Application | AACSB: Analytic

17. Refer to Exhibit 2A-4. Which of the following statements is *true*?
a. The slope at point *B* is greater than the slope at point *A*.
b. The slope at point *A* is less than the slope at point *B*.
c. The slope at point *A* is greater than the slope at point *B*.
d. The slope at point *B* is the same as the slope at point *A*.
e. The slope at point *A* is negative, whereas the slope at point *B* is positive.

c; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

Exhibit 2A-5



True/False Questions

18. According to Exhibit 2A-5, the slope of line 1 may be 1.25, whereas the slope of line 2 may be .75.
True; Challenging

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Application | AACSB: Analytic

Multiple Choice Questions

19. Refer to Exhibit 2A-5. The movement from *A* to *B* is called a
a. change in dimension.
b. shift in the curve.

c. movement along the curve.
d. change in the intercept.
e. change in the slope.

c; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

20. Refer to Exhibit 2A-5. The movement from *C* to *B* is called a
a. change in dimension.
b. shift in the relationship between *X* and *Y*.
c. movement along the curve.
d. parallel change.
e. constant.

a; Moderate

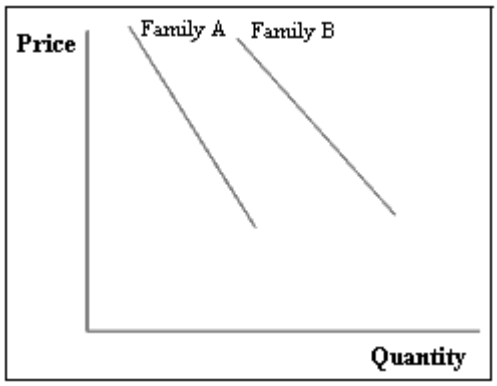
OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Knowledge | AACSB: Analytic

21. Refer to Exhibit 2A-5. Which of the following would best explain the shift from line 1 to line 2?
a. An increase in *X*
b. A decline in *Y*
c. A decrease in *X*
d. A change in a third variable, *Z*, which affects the relationship between *Y* and *X*
e. An increase in the slope

d; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

Exhibit 2A-6

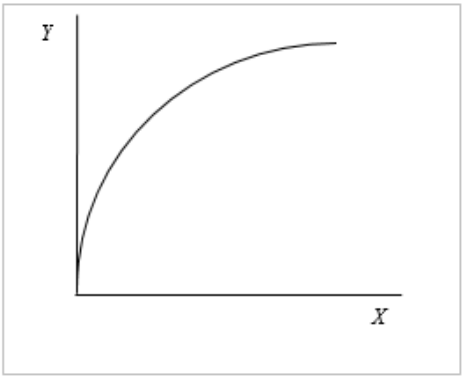


22. Exhibit 2A-6 shows the relationship between the price of sodas and the quantities that two families are willing to buy. Suppose that both families are willing to buy more sodas while the soda price remain constant. Which of the following is correct?
    a. A shift of both curves to the right
    b. A shift of both curves to the left
    c. A shift of the curve for Family A to the right and a shift of the curve for Family B to the left
    d. A shift of the curve for Family B to the right and a shift of the curve for Family A to the left
    e. A movement along each of the two curves

    a; Moderate

    OBJ: conceptual
    SEC: 4. Appendix: Reading, Understanding and Creating Graphs
    TOP: Graphs
    MSC: Bloom's: Analysis | AACSB: Analytic

    Exhibit 2A-7



23. Exhibit 2A-7 shows the relationship between X and Y. The slope of the relationship is
    a. positive, and the slope increases with Y.
    b. positive, and the slope decreases with Y.
    c. equal to –1.
    d. negative, and the slope increases with Y.
    e. negative, and the slope decreases with Y.

    b; Moderate

    OBJ: conceptual
    SEC: 4. Appendix: Reading, Understanding and Creating Graphs
    TOP: Slopes
    MSC: Bloom's: Knowledge | AACSB: Analytic

    Exhibit 2A-8

X	Y
25	60
33	69
40	76
42	78

True/False Questions

24. There is a linear relationship between *X* and *Y* in Exhibit 2A-8.
False; Challenging

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

25. The slope of the relationship between *X* and *Y* is positive in Exhibit 2A-8.
True; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

26. Suppose the value of one variable rises while the value of another variable falls; then the slope of the relationship between the two variables is between 0 and 1.
False; Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

27. A two-dimensional graph cannot be used to show what will happen to the relationship between *X* and *Y* if any of the *ceteris paribus* assumptions change.
False; Challenging

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Analysis | AACSB: Analytic

Short Answer Questions

28. Explain the purpose of each of the following types of graphs:
(A) Time-series graph
(B) Scatter plot
(C) Pie chart

ANSWER:
(A) A time-series graph is used to show how the values of a variable change over time.
(B) A scatter plot is used to compare two variables to determine if and how they are correlated.
(C) A pie chart is used for comparing percentage shares for a small number of different groups or a small number of time periods.
Moderate

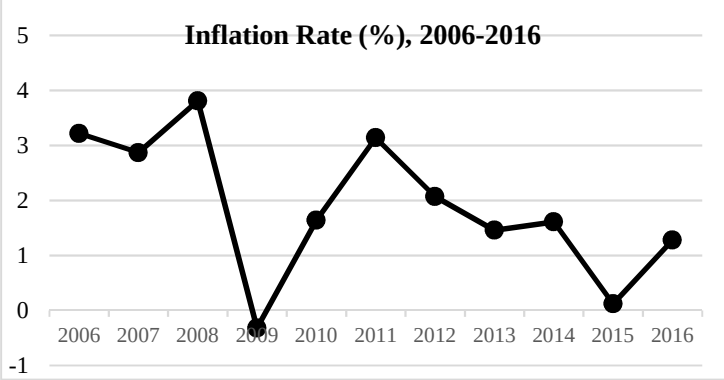
OBJ: factual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Visualizing Observations with Graphs
MSC: Bloom's: Knowledge

29. The table below shows the inflation rate for the period 2006 through 2016. Suppose you wanted to show that there was not much variation in the inflation rate over this period. How would you represent this table in a graph? Suppose you wanted to show that there was a large amount of variation during this period. How would you represent this table in a graph?

Year	Inflation Rate
2006	3.2
2007	2.9
2008	3.8
2009	-0.3
2010	1.6
2011	3.1
2012	2.1
2013	1.5
2014	1.6
2015	0.1
2016	1.3

ANSWER:
The figure below is drawn such that the maximum value on the vertical axis is 12 percent. Changes in the inflation rate seem slight.

The figure below is purposely drawn large, and the maximum value on the vertical axis is 5 percent. Here the changes in the inflation rate seem large.

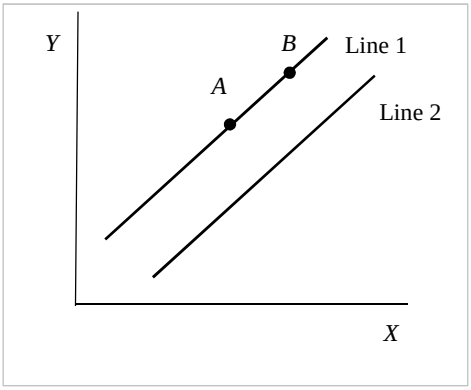


Challenging

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Time-Series Graphs
MSC: Bloom's: Application | AACSB: Application of Knowledge

30. Graph the relationship between *X* and *Y* such that the relationship between *X* and *Y* is linear and positive.
(A) On this graph, show what happens to *Y* if *X* increases.
(B) Suppose there is a third variable, *Z*, that causes *Y* to decrease (for any given value of *X*) whenever *Z* increases. Show what happens to the relationship between *X* and *Y*.

ANSWER:
Line 1 in the figure below shows the linear and positive relationship between *X* and *Y*. An increase in *X* causes a movement from *A* to *B* along line 1. The increase in *Z* causes the shift from line 1 to line 2. Notice that this is the same as saying that the value of *Y* decreases for any given value of *X*.



Challenging

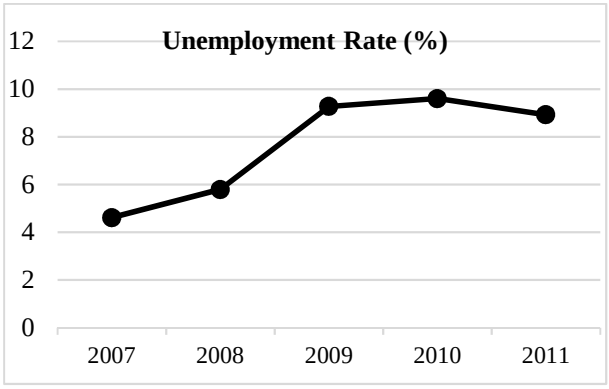
OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Slopes
MSC: Bloom's: Knowledge | AACSB: Analytic

31. Refer to the table below, which shows data for the United States.

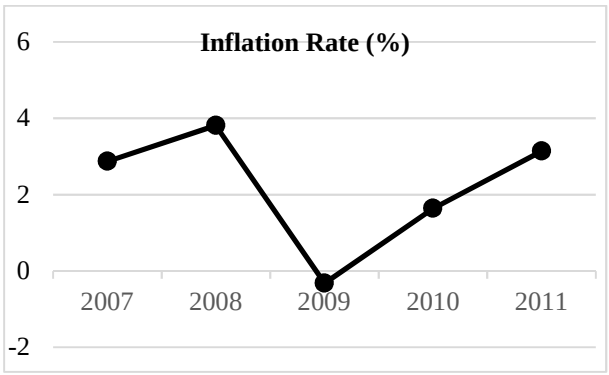
Year	Unemployment Rate (%)	Inflation Rate (%)
2007	4.6	2.9
2008	5.8	3.8
2009	9.3	-0.3
2010	9.6	1.6
2011	8.9	3.1

(A) Construct a time-series plot of the unemployment rate.
(B) Construct a time-series plot of the inflation rate.
(C) Construct a scatter plot of the data. Is there any apparent correlation between the inflation rate and the unemployment rate in these data?

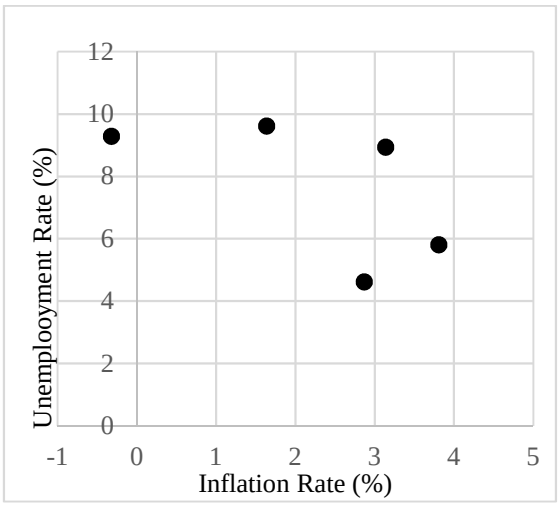
ANSWER:
(A) A time-series plot of the unemployment rate:



(B) A time-series plot of the inflation rate:



(C) A scatter plot is shown below. There is an apparent negative correlation between the inflation rate and the unemployment rate.



Moderate

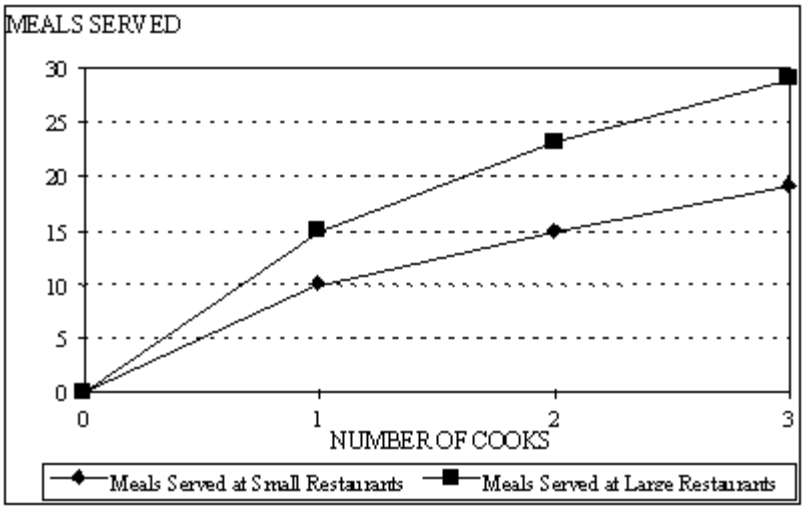
OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Working with Data
MSC: Bloom's: Application | AACSB: Application of Knowledge

32. Refer to the table below. Analyze the data on the number of meals served at small and large restaurants. The number of meals served will vary with the number of cooks employed at the restaurant.

Meals Served at Small Restaurants	Meals Served at Large Restaurants	Number of Cooks
0	0	0
10	15	1
15	23	2
19	29	3

(A) Show the relationship between cooks and meals served by graphing two curves with cooks on the horizontal axis and the number of meals on the vertical axis. How do the slopes of the curves change as more cooks are employed?
(B) Is the change in the number of cooks a shift in the curve or a movement along the curve?
(C) Is the change in the size of the restaurant a shift in the curve or a movement along the curve?

ANSWER:
(A) The relationship between cooks and meals served by graphing two curves with cooks on the horizontal axis and the number of meals on the vertical axis:



The slopes of the curves get flatter as more cooks are employed.

(B) The change in the number of cooks is a movement along the curve.

(C) The change in the size of the restaurant constitutes a shift in the curve.
Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Working with Data
MSC: Bloom's: Application | AACSB: Application of Knowledge

33. Consider a ratio for the total number of miles traveled by car divided by the total number of drivers.
(A) If both the total number of miles traveled by car and the total number of drivers increase

over time, what must be true for the ratio to rise over time?

(B) If both the total number of miles traveled by car and the total number of drivers fall over time, what must be true for the ratio to rise over time?

(C) If the ratio is not changing over time, what must be true about the total number of miles traveled by car and the total number of drivers over time, and relative to each other?

ANSWER:

(A) The total number of miles traveled by car must increase faster than the total number of drivers.

(B) The total number of drivers must decrease faster than the decrease in the total number of miles traveled by car.

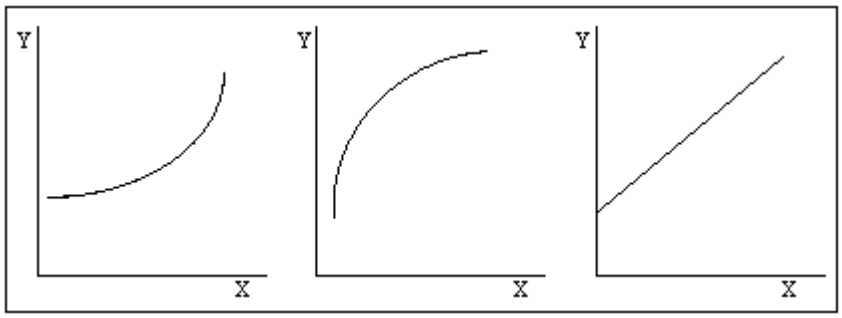
(C) The total number of miles traveled by car must increase or decrease at the same rate as does the total number of drivers.

Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Ratio Scale
MSC: Bloom's: Application | AACSB: Analytic

34. A positive relationship represents a situation where an increase in one variable is associated with an increase in the other variable. Draw three graphs that represent a positive relationship.

ANS:



Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Relationship between Variables
MSC: Bloom's: Application | AACSB: Analytic

35. Consider a straight line with a slope of +1 that intersects the origin. It dissects the positive *X*-*Y* quadrant. Select any point on the line. What must be true about the distance between the origin and the *X* coordinate and between the origin and the *Y* coordinate?

ANSWER:
The distance is the same.
Moderate

OBJ: conceptual
SEC: 4. Appendix: Reading, Understanding and Creating Graphs
TOP: Graphs
MSC: Bloom's: Analysis | AACSB: Analytic