1. A direct relationship exists when:
   a. there is no association between two variables.
   b. one variable increases and there is no change in the other variable.
   c. one variable increases and the other variable increases.
   d. one variable increases and the other variable decreases.

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

2. An upward-sloping line or curve is used to illustrate:
   a. a direct relationship. b. an inverse relationship.
   c. two unrelated variables. d. the *ceteris paribus* assumption.

ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

3. Suppose two variables are directly related. If one variable rises, then the other variable:
   a. also rises. b. falls.
   c. remains unchanged. d. reacts unpredictably.

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

4. Which of the following pairs is the most likely to exhibit a direct relationship?
   a. The price of gasoline and the amount of gasoline that people purchase.
   b. Cholesterol levels and the likelihood of developing heart disease.
   c. Outdoor temperature and heating oil sales.
   d. Annual income and weekly pawn shop visits.

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

5. A direct relationship is expressed graphically as a:
   a. positively sloped line or curve. b. negatively sloped line or curve.
   c. horizontal line. d. vertical line.

ANSWER: a
POINTS: 1
DIFFICULTY: Easy

TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

6. An inverse relationship exists when:
   a. there is no association between two variables.
   b. one variable increases and there is no change in the other variable.
   c. one variable increases and the other variable increases.
   d. one variable increases and the other variable decreases.

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

7. Which of the following pairs is the most likely to exhibit an inverse relationship?
   a. The amount of time you study and your grade point average.
   b. People's annual income and their expenditure on personal computers.
   c. Baseball players' salaries and their batting averages.
   d. The price of a concert and the number of tickets people purchase.

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

8. When an inverse relationship is graphed, the resulting line or curve is:
   a. horizontal. b. vertical.
   c. upward-sloping. d. downward-sloping.

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Knowledge

9. The slope of a line parallel to the vertical axis is:
   a. 1.
   b. 0.
   c. infinite.
   d. undefined.

ANSWER: c
POINTS: 1

10. The slope of a line parallel to the horizontal axis is:
   a. 1.
   b. 0.

c. infinite.
d. undefined.

ANSWER: b
POINTS: 1

11. Measured between two points on a curve, the ratio of the change in the variable on the vertical axis to the change in the variable on the horizontal axis is the:

a. axis. b. slope.
c. dependent curve. d. independent curve.

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Knowledge

12. Which of the following statements is correct?

a. Slope is the ratio of the vertical change (the rise or fall) to the horizontal change (the run).
b. A direct relationship is one in which two variables change in the same direction.
c. An inverse relationship is one in which two variables change in opposite directions.
d. An independent relationship is one in which two variables are unrelated.
e. All of these.

ANSWER: e
POINTS: 1
DIFFICULTY: Challenging
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

13. Which of the following is used to illustrate an independent relationship between two variables?

a. An upward-sloping curve b. A downward-sloping curve
c. A hill-shaped curve d. A horizontal or vertical line

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

14. A line that has a different slope at each point is a:

a. curve. b. straight line.
c. vertical line. d. horizontal line.

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Curve
KEYWORDS: Bloom's: Knowledge

15. When an independent relationship is graphed, the resulting line or curve is:

a. upward-sloping.

b. downward-sloping.

c. vertical.

d. horizontal.

ANSWER: d

POINTS: 1

16. Assume there is a relationship between two variables and the other-variables-held constant assumption (ceteris paribus) is relaxed. We would expect that the line representing this relationship would:

a. change from inverse to direct.

b. change from direct to inverse.

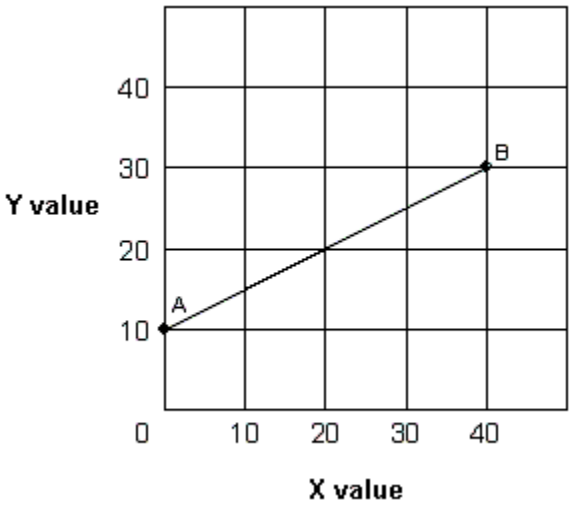
c. have a greater number of data points.

d. change its location.

ANSWER: d

POINTS: 1

Exhibit 1A-1 Straight line



17. In Exhibit 1A-1, as X increases along the horizontal axis, corresponding to points A-B on the line, the Y values increase. The relationship between the X and Y variables is:

a. direct. b. inverse.

c. independent. d. variable.

ANSWER: a

POINTS: 1

DIFFICULTY: Moderate

TOPICS: A Direct Relationship

KEYWORDS: Bloom's: Analysis

18. Straight line AB in Exhibit 1A-1 shows that:

a. increasing values for X will decrease the values of Y.

b. decreasing values for X will increase the values of Y.

c. there is a direct relationship between X and Y.

d. all of these.

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

19. In Exhibit 1A-1, the slope of straight line AB is:
    a. positive. b. zero.
    c. negative. d. variable.

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

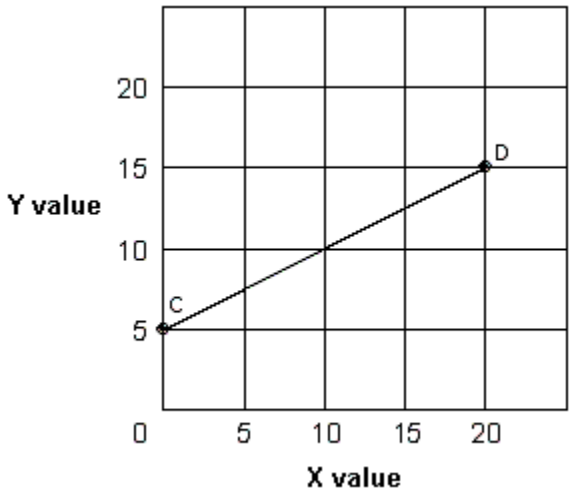
20. In Exhibit 1A-1, the slope of straight line AB is:
    a. 1. b. 5.
    c. 1/2. d. −1.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

21. As shown in Exhibit 1A-1, the slope of straight line AB:
    a. decreases with increases in X. b. increases with increases in X.
    c. increases with decreases in X. d. remains constant with changes in X.

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

Exhibit 1A-2 Straight line



22. Straight line CD in Exhibit 1A-2 shows that:
    a. increasing values for X will increase the value of Y.
    b. decreasing values for X will decrease the value of Y.
    c. there is a direct relationship between X and Y.
    d. all of these.

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

23. In Exhibit 1A-2, as X increases along the horizontal axis, corresponding to points C-D on the line, the Y values increase. The relationship between the X and Y variables is:
    a. direct. b. inverse.
    c. independent. d. variable.

ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Analysis

24. In Exhibit 1A-2, the slope of straight line CD is:
    a. 3. b. 1.
    c. −1. d. 1/2.

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

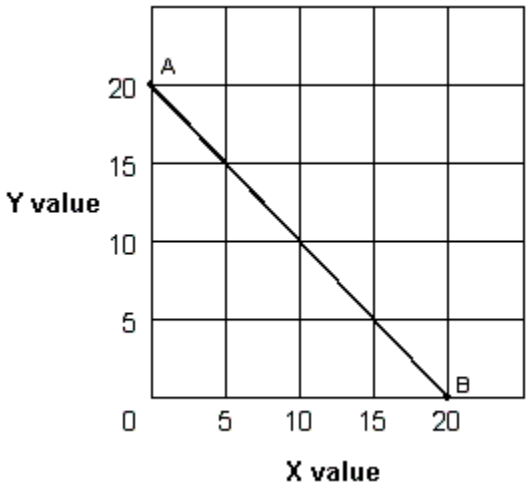
25. In Exhibit 1A-2, the slope of straight line CD is:
    a. positive. b. zero.
    c. negative. d. variable.

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

26. As shown in Exhibit 1A-2, the slope of straight line CD:
a. decreases with increases in X.
b. increases with increases in X.
c. increases with decreases in X.
d. remains constant with changes in X.

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

Exhibit 1A-3 Straight line



27. Straight line AB in Exhibit 1A-3 shows that:
a. increasing values for X reduces the value of Y.
b. decreasing values for X increases the value of Y.
c. there is an inverse relationship between X and Y.
d. all of these.

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

28. In Exhibit 1A-3, as X increases along the horizontal axis, corresponding to points A-B on the line, the Y values decrease. The relationship between the X and Y variables is:
a. direct.
b. inverse.
c. independent.
d. variable.

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

29. As shown in Exhibit 1A-3, the slope of straight line AB:
    a. decreases with increases in X.
    b. increases with increases in X.
    c. increases with decreases in X.
    d. remains constant with changes in X.

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

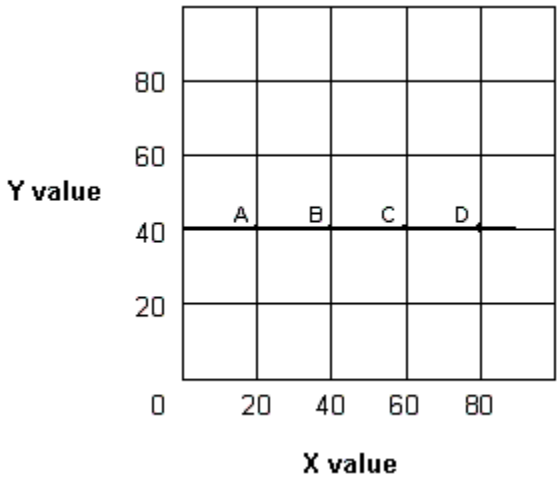
30. In Exhibit 1A-3, the slope for straight line AB is:
    a. 3.
    b. 1.
    c. −1.
    d. −5.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

31. In Exhibit 1A-3, the slope of straight line AB is:
    a. positive.
    b. zero.
    c. negative.
    d. variable.

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

Exhibit 1A-4 Straight line



32. In Exhibit 1A-4, the slope of the straight line A-D is:

a. 0. b. 1.

c. 1/2. d. −1.

ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

33. Straight line A-D in Exhibit 1A-4 shows that:

a. increasing value for X will increase the value of Y.

b. increasing value for X will decrease the value of Y.

c. increasing values for X do not affect the value of Y.

d. all of these.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

34. In Exhibit 1A-4, the slope of straight line A-D is:

a. positive. b. zero.

c. negative. d. variable.

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

35. In Exhibit 1A-4, as X increases along the horizontal axis, corresponding to points A-D on the line, the Y value remains unchanged at 40 units. The relationship between the X and Y variables is:

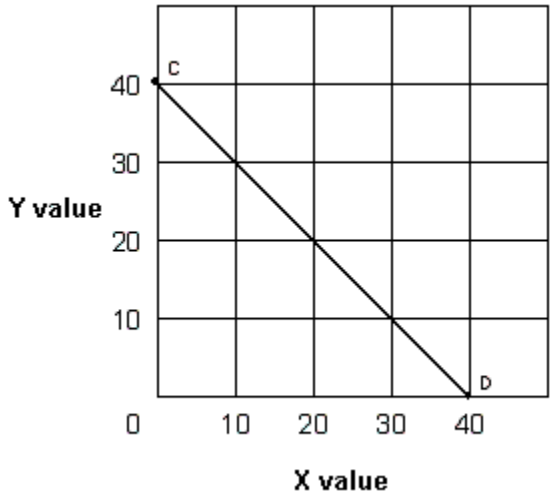
a. direct. b. inverse.

c. independent d. undefined.

.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

Exhibit 1A-5 Straight line



36. Straight line CD in Exhibit 1A-5 shows that:
    a. increasing values for X increases the value of Y.
    b. decreasing values for X decreases the value of Y.
    c. there is an inverse relationship between X and Y.
    d. all of these.

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

37. In Exhibit 1A-5, as X increases along the horizontal axis, corresponding to points C-D on the line, the Y values decrease. The relationship between the X and Y variables is:
    a. direct. b. inverse.
    c. independent. d. variable.

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Analysis

38. In Exhibit 1A-5, the slope of straight line CD is:
    a. positive. b. zero.
    c. negative. d. variable.

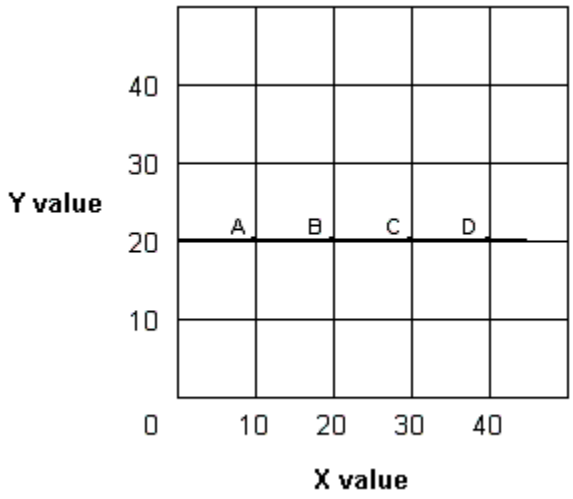
ANSWER: c

POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

39. In Exhibit 1A-5, the slope for straight line CD is:
    a. 5. b. 1.
    c. −1. d. −5.
ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

40. As shown in Exhibit 1A-5, the slope of straight line CD:
    a. decreases with increases in X. b. increases with increases in X.
    c. increases with decreases in X. d. remains constant with changes in X.
ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

Exhibit 1A-6 Straight line



41. In Exhibit 1A-6, the slope of the straight line A-D is:
    a. 0. b. 1.
    c. 1/2. d. −1.
ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line

KEYWORDS: Bloom's: Analysis

42. In Exhibit 1A-6, the slope of straight line A-D is:
a. positive. b. zero.
c. negative. d. variable.

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

43. Straight line A-D in Exhibit 1A-6 shows that:
a. increasing value for X will increase the value of Y.
b. increasing value for X will decrease the value of Y.
c. increasing values for X does not affect the value of Y.
d. all of these.

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

44. In Exhibit 1A-6, as X increases along the horizontal axis, corresponding to points A-D on the line, the Y values remain unchanged at 20 units. The relationship between the X and Y variables is:
a. direct. b. inverse.
c. independent d. undefined.
.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

45. In Exhibit 1A-6, the slope of straight line A-D is:
a. greater than 1. b. equal to 1.
c. less than 1. d. zero.

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

46. In a graphic relationship, shifts in a curve are caused by a change in:
a. the slope of the curve.
b. a factor not measured on the axes of the graph.
c. one of the factors measured on either axes of the graph.
d. any factor, whether measured on the axes of the graph of not.

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Comprehension

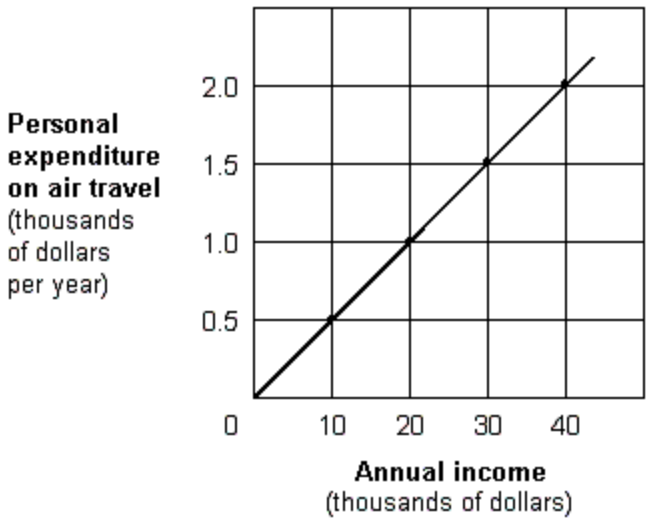
47. A shift in a curve represents a change in:
a. the variable on the horizontal axis.
b. the variable on the vertical axis.
c. a third variable that is not on either axis.
d. any variable that is relevant to the relationship being graphed.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Comprehension

48. A change in a third variable *not* on either axis of a graph is illustrated with a:
a. horizontal or vertical line. b. movement along a curve.
c. shift of a curve. d. point of intersection.

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Comprehension

Exhibit 1A-7 Straight line relationship



49. According to Exhibit 1A-7, the relationship between annual income and air-travel expenditures is:
a. direct. b. inverse.
c. complex. d. independent.

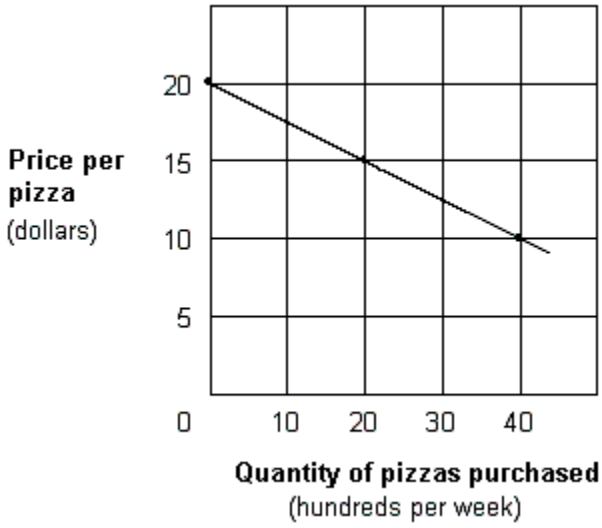
ANSWER: a
POINTS: 1

DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

50. What is the slope of the line shown in Exhibit 1A-7?
a. 1/20 b. 1/10.
.
c. 1/5. d. 1/2.
ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Analysis

51. Which of the following would cause a shift in the relationship shown in Exhibit 1A-7?
a. A rise in people's annual income.
b. A rise in people's expenditure on air travel.
c. A rise in the price of air travel.
d. All of these would shift the line in the graph.
ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Analysis

Exhibit 1A-8 Straight line relationship



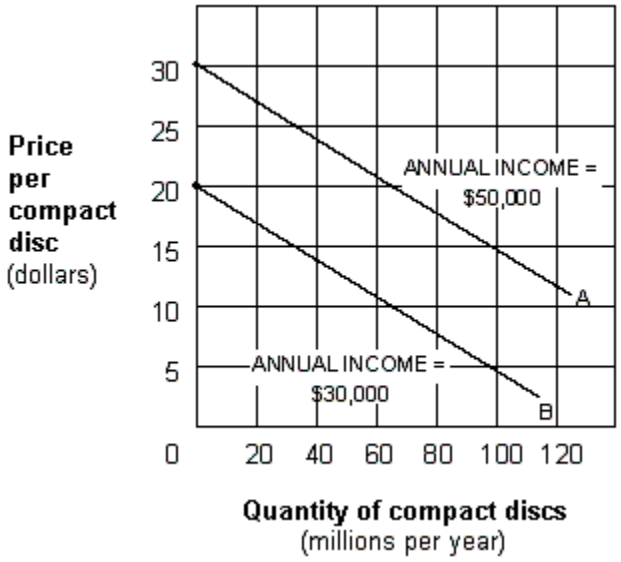
52. According to the Exhibit 1A-8, the relationship between the price and quantity purchased of pizza is:
a. direct. b. inverse.
c. complex. d. independent.
ANSWER: b
POINTS: 1
DIFFICULTY: Easy

TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

53. What is the slope of the line shown in Exhibit 1A-8?
a. −1. b. −1/2.
c. −1/4. d. 0.
ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
TOPICS: The Slope of a Curve
KEYWORDS: Bloom's: Analysis

54. Which of the following would cause a shift in the relationship shown in Exhibit 1A-8?
a. A fall in household incomes.
b. A fall in the price of pizza.
c. A fall in the quantity of pizza that people wish to purchase.
d. All of these would shift the line in the graph.
ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Analysis

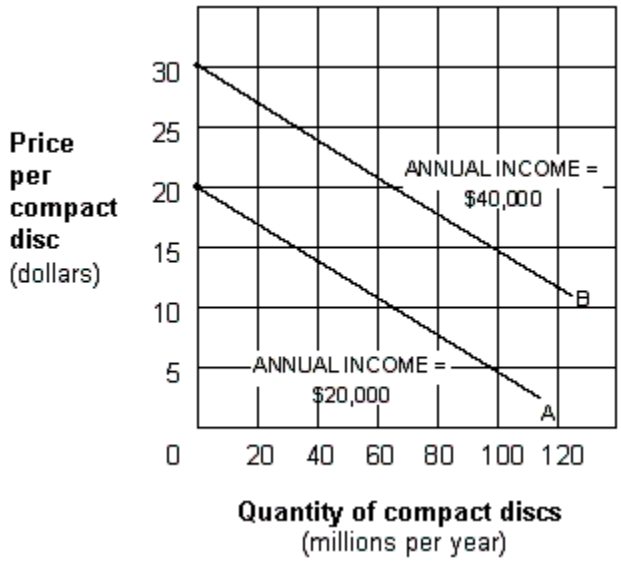
Exhibit 1A-9 Multi-curve graph



55. Exhibit 1A-9 represents a three-variable relationship. As the annual income of consumers falls from $50,000 (line A) to $30,000 (line B), the result is a:
a. rightward movement along each curve. b. leftward movement along each curve,.
c. leftward shift in curve A to curve B. d. rightward shift in curve A to curve B.
ANSWER: c
POINTS: 1
DIFFICULTY: Challenging

TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Analysis

Exhibit 1A-10 Multi-curve graph



56. Exhibit 1A-10 represents a three-variable relationship. As the annual income of consumers rises from $20,000 (line A) to $40,000 (line B), the result is a:

a. rightward movement along each curve.
b. leftward movement along each curve.
c. leftward shift in curve B to curve A.
d. leftward shift in curve A to curve B.

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Analysis

57. A graph is one method of expressing a model.

a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Knowledge

58. Direct relationships are illustrated using upward-sloping lines and curves.

a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

59. The graph of a direct relationship will have a positive slope.
    a. True
    b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Knowledge

60. An upward-sloping straight line exhibits a direct relationship between two variables.
    a. True
    b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

61. A downward-sloping straight line exhibits a direct relationship between two variables.
    a. True
    b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Easy
TOPICS: A Direct Relationship
KEYWORDS: Bloom's: Comprehension

62. If two variables are inversely related, then they change in the same direction.
    a. True
    b. False
ANSWER: False
POINTS: 1
DIFFICULTY: Easy
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

63. Two variables that are inversely related tend to move in opposite directions.
    a. True
    b. False
ANSWER: True
POINTS: 1
DIFFICULTY: Easy
TOPICS: An Inverse Relationship
KEYWORDS: Bloom's: Comprehension

64. The slope of a line is calculated as the ratio of the "rise" over the "run".

a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

65. A horizontal line has an infinite slope.
a. True
b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

66. A downward-sloping line has a negative slope.
a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Easy
TOPICS: The Slope of a Straight Line
KEYWORDS: Bloom's: Comprehension

67. A straight line or curve can shift when a factor not included on the vertical axis or horizontal axis changes.
a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Comprehension

68. A graph can be used to illustrate the relationship between the price of compact discs and the quantity of compact discs demanded. If there is evidence that buyers' income also influences the demand for compact discs, then a movement along the curve can be caused by a change in the price of compact discs.
a. True
b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Moderate
TOPICS: A Three-Variable Relationship in One Graph
KEYWORDS: Bloom's: Comprehension

69. Distinguish a direct and an inverse or negative relationship. Provide an example of each type of relationship.

ANSWER: A direct relationship between two variables means an increase in the value of the independent variable will cause an increase in the value of the dependent variable; and vice versa. An example would be the relationship between the selling price of a good and the amount of the good put up for sale by producers. An inverse relationship between two variables means an increase in the value of the independent variable will cause a decrease in the value of the dependent variable; and vice versa. An example would be the relationship between the price of a good and the amount purchased.

POINTS: 1

DIFFICULTY: Challenging

TOPICS: A Direct Relationship
An Inverse Relationship

KEYWORDS: Bloom's: Analysis

70. Graphically express a direct and an inverse or negative relationship. What could cause a shift in a line or curve expressing a relationship between two variables?

ANSWER: A direct relationship will slope upward; it will have a positive slope. An inverse relationship will slope downward; it will have a negative slope. A change in some relevant variable other than those listed on the vertical or horizontal axis must change in order to shift a line or curve expressing a relationship between two variables.

POINTS: 1

DIFFICULTY: Challenging

TOPICS: A Direct Relationship
An Inverse Relationship

KEYWORDS: Bloom's: Analysis