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| 1. The point at which the axes of a graph intersect is called the:   |  |  |  | | --- | --- | --- | |  | a. | slope. | |  | b. | origin. | |  | c. | graph. | |  | d. | intercept. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 2. The \_\_\_\_\_ of a curve is the point at which the curve intersects an axis.   |  |  |  | | --- | --- | --- | |  | a. | slope | |  | b. | steepness | |  | c. | intercept | |  | d. | origin |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 3. If two variables are positively related, on a graph they will always be represented by a:   |  |  |  | | --- | --- | --- | |  | a. | line or curve that slopes downward. | |  | b. | straight line. | |  | c. | horizontal line. | |  | d. | line or curve that slopes upward. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 4. If two variables are negatively related, they will always be represented by a:   |  |  |  | | --- | --- | --- | |  | a. | line or curve that slopes downward. | |  | b. | straight line. | |  | c. | horizontal line. | |  | d. | line or curve that slopes upward. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 5. If two variables are negatively related:   |  |  |  | | --- | --- | --- | |  | a. | as one rises in value, the other must also rise in value. | |  | b. | as one rises in value, the other must fall in value. | |  | c. | they move randomly relative to each other. | |  | d. | one variable is always the reciprocal of the other. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 6. If two variables are positively related:   |  |  |  | | --- | --- | --- | |  | a. | as one rises in value, the other must also rise in value. | |  | b. | as one rises in value, the other must fall in value. | |  | c. | they move randomly relative to each other. | |  | d. | one variable is always the reciprocal of the other. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 7. The relationship between two variables that move in the same direction is said to be:   |  |  |  | | --- | --- | --- | |  | a. | independent. | |  | b. | neutral. | |  | c. | positive. | |  | d. | indirect. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 8. The relationship between two variables that move in opposite directions is said to be:   |  |  |  | | --- | --- | --- | |  | a. | independent. | |  | b. | positive. | |  | c. | direct. | |  | d. | negative. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 9. On a two-dimensional graph representing two variables:   |  |  |  | | --- | --- | --- | |  | a. | a positively sloped curve means that high values of one variable are associated with high values of the other variable. | |  | b. | a positively sloped curve means that high values of one variable are associated with low values of the other variable. | |  | c. | a vertical curve has a zero slope. | |  | d. | a curve that is increasing at a decreasing rate has a zero slope. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 10. On a two-dimensional graph representing two variables:   |  |  |  | | --- | --- | --- | |  | a. | a negatively sloped curve means that high values of one variable are associated with high values of the other variable. | |  | b. | a positively sloped curve means that high values of one variable are associated with low values of the other variable. | |  | c. | a vertical curve has a slope of infinity. | |  | d. | a curve that is increasing at a decreasing rate has a zero slope. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 11. On a two-dimensional graph representing two variables:   |  |  |  | | --- | --- | --- | |  | a. | a positively sloped curve means the variables are negatively related. | |  | b. | a negatively sloped curve means the two variables are positively related. | |  | c. | a horizontal curve has a zero slope. | |  | d. | a vertical curve has a zero slope. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 12. (Figure: Iced Tea and Temperature) Use Figure: Iced Tea and Temperature. In the figure, a movement from point *C* to point *E* means that the outside temperature has \_\_\_\_\_ degrees, and the number of iced teas has \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 30; decreased by 30 | |  | b. | increased by 20; increased by 20 | |  | c. | increased by 30; increased by 30 | |  | d. | increased by 40; increased by 40  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 13. (Figure: Iced Tea and Temperature) Use Figure: Iced Tea and Temperature. In the figure, a movement from point *B* to point *C* means that the outside temperature has \_\_\_\_\_ degrees, and the number of iced teas has \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 30; decreased by 30 | |  | b. | increased by 20; increased by 20 | |  | c. | increased by 30; increased by 30 | |  | d. | increased by 40; increased by 40  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 14. (Figure: Iced Tea and Temperature) Use Figure: Iced Tea and Temperature. In the figure, a movement from point *C* to point *D* means that the outside temperature has \_\_\_\_\_ degrees, and the number of iced teas has \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 30; decreased by 30 | |  | b. | increased by 20; increased by 20 | |  | c. | increased by 30; increased by 30 | |  | d. | increased by 40; increased by 40  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 15. (Figure: Hot Chocolate Sold and Temperature) Use Figure: Hot Chocolate Sold and Temperature. In the figure, a movement from point *K* to point *L* means that the outside temperature has \_\_\_\_\_ degrees, and the number of hot chocolates sold has \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 30; increased by 30 | |  | b. | increased by 20; decreased by 20 | |  | c. | increased by 30; decreased by 30 | |  | d. | increased by 40; decreased by 40  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 16. (Figure: Hot Chocolate Sold and Temperature) Use Figure: Hot Chocolate Sold and Temperature. In the figure, a movement from point *J* to point *L* means that the outside temperature has \_\_\_\_\_ degrees, and the number of hot chocolates sold has \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 30; increased by 30 | |  | b. | increased by 20; decreased by 20 | |  | c. | increased by 30; decreased by 30 | |  | d. | increased by 40; decreased by 40  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 17. (Figure: Hot Chocolate Sold and Temperature) Use Figure: Hot Chocolate Sold and Temperature. In the figure, a movement from point *L* to point *M* means that the outside temperature has \_\_\_\_\_ degrees, and the number of hot chocolates sold has \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 30; increased by 30 | |  | b. | increased by 20; decreased by 20 | |  | c. | increased by 30; decreased by 30 | |  | d. | increased by 40; decreased by 40  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 18. (Figure: Cheese and Yoghurt) Use Figure: Cheese and Yoghurt. In the figure, a movement from point *B* to point *C* means that the *x*-variable has \_\_\_\_\_ units, and the *y*-variable has \_\_\_\_\_ units.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 2; increased by 15 | |  | b. | increased by 2; decreased by 15 | |  | c. | decreased by 15; increased by 2 | |  | d. | increased by 15; decreased by 2  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 19. (Figure: Cheese and Yoghurt) Use Figure: Cheese and Yoghurt. In the figure, a movement from point *C* to point *B* means that the *x*-variable has \_\_\_\_\_ units, and the *y*-variable has \_\_\_\_\_ units.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreased by 2; increased by 15 | |  | b. | increased by 2; decreased by 15 | |  | c. | decreased by 15; increased by 2 | |  | d. | increased by 15; decreased by 2  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 20. In the graph of a curve, the vertical intercept is the:   |  |  |  | | --- | --- | --- | |  | a. | value of the *y*-variable when the value of the *x*-variable is zero. | |  | b. | change in the *y*-variable between two points divided by the change in the *x*-variable between the same two points. | |  | c. | value of the *y*-variable when the value of the slope is zero. | |  | d. | value of the *x*-variable when the value of the *y*-variable is zero. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 21. (Table: Hours Spent on Homework and Examination Result) Use Table: Hours Spent on Homework and Examination Result. The table shows data for students in an accounting class. If we were to graph these data and draw a line through the points, we would choose \_\_\_\_\_ to be the independent variable; the vertical intercept of our line would be \_\_\_\_\_; and the slope of our line would be \_\_\_\_\_.   |  |  | | --- | --- | | **Table: Hours Spent on Homework and Examination Result** | | | **Hours Spent Studying** | **Examination Result** **(max 10 points)** | | 0 | 2 | | 1 | 4 | | 2 | 6 | | 3 | 8 | | 4 | 10 |  |  |  |  | | --- | --- | --- | |  | a. | examination result; *y* = 2; –2 | |  | b. | examination result; *x* = 0; –2 | |  | c. | hours spent studying; *y* = 0; +2 | |  | d. | hours spent studying; *y* = 2; +2 |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 22. (Figure: Demand and Supply of Coffee) Use Figure: Demand and Supply of Coffee. In the graph, the line labeled *D* shows how many pounds of coffee per week will be demanded at various prices. It is clear that as the price of coffee falls:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | less coffee will be demanded. | |  | b. | more coffee will be demanded. | |  | c. | the same quantity of coffee will be demanded. | |  | d. | it is unclear what will happen to the quantity of coffee demanded.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 23. (Figure: Demand and Supply of Coffee) Use Figure Demand and Supply of Coffee. The line labeled *S* shows how many pounds of coffee per week will be offered for sale at various prices. It is clear that quantity supplied and price are:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | the same. | |  | b. | positively related. | |  | c. | negatively related. | |  | d. | not related.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 24. (Table: Earnings and Hours Worked) Use Table: Earnings and Hours Worked. Consider the accompanying table. If we were to graph, the relationship between earnings per hour and hours worked, the resulting curve would be:   |  |  |  | | --- | --- | --- | | **Table: Wages and Hours Willing to Work** | | | | **Point** | **Wage** | **Hours Worked** | | A | 6 | 0 | | B | 8 | 5 | | C | 12 | 20 | | D | 20 | 40 | | E | 30 | 45 |  |  |  |  | | --- | --- | --- | |  | a. | linear. | |  | b. | coordinated. | |  | c. | nonlinear. | |  | d. | negatively sloped. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 25. (Figure: Illustrating Slope) Use Figure: Illustrating Slope. In the graph, line 1 depicts *X* and *Y* as:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | positively related. | |  | b. | nonlinearly related. | |  | c. | unrelated. | |  | d. | negatively related.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 26. (Figure: Illustrating Slope) Use Figure: Illustrating Slope. In the graph, line 3 depicts *X* and *Y* as:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | positively related. | |  | b. | unrelated. | |  | c. | negatively related. | |  | d. | both fixed in value.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 27. (Figure: Demand and Supply) Use Figure: Demand and Supply. The curve labeled *D* indicates that a price of $2 is associated with a quantity of:  ​   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 1. | |  | c. | 2. | |  | d. | 3.  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 28. (Figure: Demand and Supply) Use Figure: Demand and Supply. The curve labeled *S* indicates that a price of $2 is associated with a quantity of:  ​   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 1. | |  | c. | 2. | |  | d. | 3.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 29. (Figure: Slope) Use Figure: Slope. This graph depicts \_\_\_\_\_ relationship between the *X* and *Y* variables*.*   |  |  |  | | --- | --- | --- | |  | a. | a positive | |  | b. | a negative | |  | c. | an independent | |  | d. | no  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 30. (Table: Earnings and Hours Worked) Use Table: Earnings and Hours Worked. If the relationship between earnings and hours worked were graphed, with earnings on the vertical axis and hours worked on the horizontal axis, the slope of the curve between point *D* and point *E* would be:   |  |  |  | | --- | --- | --- | | **Table: Wages and Hours Willing to Work** | | | | **Point** | **Wage** | **Hours Worked** | | A | 6 | 0 | | B | 8 | 5 | | C | 12 | 20 | | D | 20 | 40 | | E | 30 | 45 |  |  |  |  | | --- | --- | --- | |  | a. | 0.5. | |  | b. | 5. | |  | c. | 45. | |  | d. | 2. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 31. (Table: Earnings and Hours Worked) Use Table: Earnings and Hours Worked. If the relationship between earnings and hours worked were graphed, with earnings on the vertical axis and hours worked on the horizontal axis, the slope of the curve between point *A* and point *B* would be:   |  |  |  | | --- | --- | --- | | **Table: Wages and Hours Willing to Work** | | | | **Point** | **Wage** | **Hours Worked** | | A | 6 | 0 | | B | 8 | 5 | | C | 12 | 20 | | D | 20 | 40 | | E | 30 | 45 |  |  |  |  | | --- | --- | --- | |  | a. | 2.5. | |  | b. | 5. | |  | c. | 2. | |  | d. | 2/5. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 32. Two points on a nonlinear curve have coordinates given by (5, 15) and (17, 13). The average slope of the curve between these points is:   |  |  |  | | --- | --- | --- | |  | a. | –1/6. | |  | b. | –6. | |  | c. | 1/4. | |  | d. | 2.5. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 33. If two points on a graph are (0, 8) and (12, 15):   |  |  |  | | --- | --- | --- | |  | a. | *X* is 0 when *Y* is 12. | |  | b. | *X* and *Y* are positively related. | |  | c. | the horizontal intercept is given by the point (0, 8). | |  | d. | the slope of a curve connecting the two points is negative. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 34. (Figure: Illustrating Slope) Use Figure: Illustrating Slope. In the graph, line 2 has a slope of:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | +1. | |  | b. | 0. | |  | c. | –1. | |  | d. | infinity.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 35. (Figure: Demand and Supply) Use Figure: Demand and Supply. The slope of the curve labeled *D* is:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | –1. | |  | b. | 0. | |  | c. | 1. | |  | d. | 3.  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 36. (Figure: Demand and Supply) Use Figure: Demand and Supply. The slope of the curve labeled *S* is:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | –1. | |  | b. | 0. | |  | c. | 1. | |  | d. | 3.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 37. The slope of a straight line is the ratio of the:   |  |  |  | | --- | --- | --- | |  | a. | vertical change to the horizontal change. | |  | b. | horizontal change to the vertical change. | |  | c. | run to the rise. | |  | d. | vertical change to the horizontal change, and it must be positive. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 38. (Figure: Slope) Use Figure: Slope. In the graph, the slope of the line between points *A* and *B* is:  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | +8. | |  | b. | –8. | |  | c. | –2. | |  | d. | +2.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 39. (Figure: Slope) Use Figure: Slope. The slope of the line in the graph can be calculated by:  ​   |  |  |  | | --- | --- | --- | |  | a. | dividing the horizontal change by the vertical change. | |  | b. | dividing the vertical change by the horizontal change. | |  | c. | subtracting the sum of the *Y* values from the sum of the *X* values. | |  | d. | adding the sum of the *X* values to the sum of the *Y* values.  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 40. The ratio of the change in the variable on the vertical axis to the change in the variable on the horizontal axis, measured between two points on the curve, is the:   |  |  |  | | --- | --- | --- | |  | a. | axis. | |  | b. | slope. | |  | c. | dependent variable. | |  | d. | independent variable. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 41. (Table: Price, Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied) Use Table: Price, Quantity of cookie dough demanded, and Quantity of cookie dough supplied. A linear relationship exists between:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Table: Price,** **Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied** | | | | | | | Price | 1 | 2 | 3 | 4 | 5 | | Quantity of Cookie Dough Demanded | 16 | 8 | 4 | 2 | 1 | | Quantity of Cookie Dough Supplied | 3 | 5 | 7 | 9 | 11 |  |  |  |  | | --- | --- | --- | |  | a. | the price and the quantity of cookie dough demanded. | |  | b. | the price and the quantity of cookie dough supplied. | |  | c. | the price and the quantity of cookie dough demanded minus the quantity of cookie dough supplied. | |  | d. | the quantity of cookie dough demanded and the quantity of cookie dough supplied. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 42. (Table: Price, Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied) Use Table: Price, Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied. The data in the figure suggest a nonlinear relationship between:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Table: Price,** **Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied** | | | | | | | Price | 1 | 2 | 3 | 4 | 5 | | Quantity of Cookie Dough Demanded | 16 | 8 | 4 | 2 | 1 | | Quantity of Cookie Dough Supplied | 3 | 5 | 7 | 9 | 11 |  |  |  |  | | --- | --- | --- | |  | a. | the price and the quantity of cookie dough demanded. | |  | b. | the price and the quantity of cookie dough supplied. | |  | c. | the price and the quantity of cookie dough demanded, as well as the price and the quantity of cookie dough supplied. | |  | d. | The table does not show a nonlinear relationship. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 43. (Table: Price, Quantity Demanded, and Quantity Supplied of Cookie Dough) Use Table: Price, Quantity Demanded, and Quantity of Cookie Dough Supplied. The slope of the line representing the relationship between price on the vertical axis and quantity supplied on the horizontal axis is:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Table: Price,** **Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied** | | | | | | | Price | 1 | 2 | 3 | 4 | 5 | | Quantity of Cookie Dough Demanded | 16 | 8 | 4 | 2 | 1 | | Quantity of Cookie Dough Supplied | 3 | 5 | 7 | 9 | 11 |  |  |  |  | | --- | --- | --- | |  | a. | equal to 1/2. | |  | b. | equal to 1. | |  | c. | equal to 2. | |  | d. | different at different points on the line. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 44. (Table: Price, Quantity Demanded, and Quantity of Cookie Dough Supplied) Use Table: Price, Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied. The slope of the line representing the relationship between price on the vertical axis and quantity demanded on the horizontal axis is:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Table: Price,** **Quantity of Cookie Dough Demanded, and Quantity of Cookie Dough Supplied** | | | | | | | Price | 1 | 2 | 3 | 4 | 5 | | Quantity of Cookie Dough Demanded | 16 | 8 | 4 | 2 | 1 | | Quantity of Cookie Dough Supplied | 3 | 5 | 7 | 9 | 11 |  |  |  |  | | --- | --- | --- | |  | a. | equal to 1/2. | |  | b. | equal to 1. | |  | c. | equal to 2. | |  | d. | different at different points on the line. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 45. (Figure: Y = f(*X*)) Use Figure: Y = f(*X*). The slope of the relationship between *x* and *y* is:  ​   |  |  |  | | --- | --- | --- | |  | a. | positive and constant. | |  | b. | negative and increasing. | |  | c. | positive and increasing. | |  | d. | positive and decreasing.  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 46. (Figure: Seasonally Adjusted Unemployment Rate) Use Figure: Seasonally Adjusted Unemployment Rate. The distance between each labeled point on the horizontal axis is one year, and the distance between each labeled point on the vertical axis is one percentage point of unemployment. What is the approximate slope of the graph between 2014 and 2016 (using percentage point and years as the units on the vertical and horizontal axes, respectively)?  ​   |  |  |  | | --- | --- | --- | |  | a. | 1/2 | |  | b. | 1 | |  | c. | –1/2 | |  | d. | –2  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 47. (Figure: Seasonally Adjusted Unemployment Rate) Use Figure: Seasonally Adjusted Unemployment Rate. The distance between each labeled point on the horizontal axis is one year, and the distance between each labeled point on the vertical axis is one percentage point of unemployment. What is the approximate slope of the graph between 2011 and 2013 (using percentage point and years as the units on the vertical and horizontal axes, respectively)?  ​   |  |  |  | | --- | --- | --- | |  | a. | 2 | |  | b. | 1 | |  | c. | –3/4 | |  | d. | –2  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 48. (Figure: Seasonally Adjusted Unemployment Rate) Use Figure: Seasonally Adjusted Unemployment Rate. The distance between each labeled point on the horizontal axis is one year, and the distance between each labeled point on the vertical axis is one percentage point of unemployment. Unemployment was approximately \_\_\_\_\_ percent in 2015 and \_\_\_\_\_ percent in 2019.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | 5.25; 3.7 | |  | b. | 5.05; 4.10 | |  | c. | 3.7; 5.25 | |  | d. | 4.10; 5.05  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 49. (Figure: Seasonally Adjusted Unemployment Rate) Use Figure: Seasonally Adjusted Unemployment Rate. The distance between each labeled point on the horizontal axis is one year, and the distance between each labeled point on the vertical axis is one percentage point of unemployment. On average, unemployment was \_\_\_\_\_ between 2010 and 2020.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | decreasing | |  | b. | increasing | |  | c. | logarithmic | |  | d. | linear  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 50. (Figure: Seasonally Adjusted Unemployment Rate) Use Figure: Seasonally Adjusted Unemployment Rate. The distance between each labeled point on the horizontal axis is one year, and the distance between each labeled point on the vertical axis is one percentage point of unemployment. Based on this graph, the unemployment rate was at its lowest point (in the given time frame) in \_\_\_\_\_ and at its highest point in \_\_\_\_\_.  ​   |  |  |  | | --- | --- | --- | |  | a. | 2018; 2013 | |  | b. | 2020; 2008 | |  | c. | 2017; 2010 | |  | d. | 2019; 2010  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 51. (Figure: Labor Force Participation Rates) Use Figure: Labor Force Participation Rates. Using the figure, the labor force participation rate for women was \_\_\_\_\_ during 1970–1985 and \_\_\_\_\_ during 1998–2006.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | increasing; slightly decreasing | |  | b. | increasing; slightly increasing | |  | c. | decreasing; slightly decreasing | |  | d. | decreasing; constant  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 52. (Figure: Labor Force Participation Rates) Use Figure: Labor Force Participation Rates. During 1970–1985, the labor force participation rate was \_\_\_\_\_ for women and \_\_\_\_\_ for men.  ​   |  |  |  | | --- | --- | --- | |  | a. | increasing; decreasing | |  | b. | increasing; increasing | |  | c. | decreasing; increasing | |  | d. | decreasing; decreasing  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 53. Your boss asks you to graph company revenues for the past 10 years. The BEST way to show this information is with a(n):   |  |  |  | | --- | --- | --- | |  | a. | scatter diagram. | |  | b. | pie chart. | |  | c. | time-series graph. | |  | d. | independent graph. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 54. The owner of the Eye of Wonder, one of five magic stores on Moonlight Road, asks you to make a graph showing each Moonlight Road magic store’s share of all five magic store’s “fancy trick” purchases. The BEST way to show this information is with a(n):   |  |  |  | | --- | --- | --- | |  | a. | scatter diagram. | |  | b. | pie chart. | |  | c. | time-series graph. | |  | d. | independent graph. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 55. Professor Micro wants to use a numerical graph to show the percentage of government spending accounted for by its various departments. Which graph is MOST suitable for this purpose?   |  |  |  | | --- | --- | --- | |  | a. | a bar graph | |  | b. | a pie chart | |  | c. | a time-series graph | |  | d. | a scatter diagram |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 56. A positive relationship between surfboards purchased and ice cream purchased could result from:   |  |  |  | | --- | --- | --- | |  | a. | reverse causality. | |  | b. | a magnified scale on the surfboard axis. | |  | c. | a truncation of the ice cream axis. | |  | d. | an omitted variable, such as the external temperature. |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 57. (Figure: Unemployment Rate over Time) Look at the figure Unemployment Rate over Time. In the time-series graph, as we move from the beginning of 2001 to the beginning of 2003, the unemployment rate \_\_\_\_\_ from approximately \_\_\_\_\_ to approximately \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | falls; 5%; 4% | |  | b. | rises; 5.3%; 7.3% | |  | c. | falls; 7.7%; 5.5% | |  | d. | rises; 4.7%; 6%  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 58. (Figure: Unemployment Rate over Time) Use Figure: Unemployment Rate over Time. In the time-series graph, as we move from 1993 to 1995, the unemployment rate \_\_\_\_\_ from approximately \_\_\_\_\_% to approximately \_\_\_\_\_%.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | falls; 5; 4 | |  | b. | rises; 5.3; 7.3 | |  | c. | falls; 7; 5.5 | |  | d. | rises; 4; 6.3  ​ |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 59. (Figure: Unemployment Rate over Time) Use Figure: Unemployment Rate over Time. In the time-series graph, as we move from 1990 to 1992, the unemployment rate \_\_\_\_\_ from approximately \_\_\_\_\_% to approximately \_\_\_\_\_%.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | falls; 5; 4 | |  | b. | rises; 5.5; 7.5 | |  | c. | falls; 7.8; 5 | |  | d. | rises; 4; 6.3  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 60. (Figure: Unemployment Rate over Time) Use Figure: Unemployment Rate over Time. In the time-series graph, as we move from 1997 to 2000, the unemployment rate \_\_\_\_\_ from approximately \_\_\_\_\_% to approximately \_\_\_\_\_%.  ​   |  |  |  | | --- | --- | --- | |  | a. | falls; 5; 4 | |  | b. | rises; 5.3; 7.3 | |  | c. | falls; 7.8; 5.5 | |  | d. | rises; 4; 6.3  ​ |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 61. A \_\_\_\_\_ graph shows how the value of one or more variables changes over some period.   |  |  |  | | --- | --- | --- | |  | a. | linear | |  | b. | time-series | |  | c. | nonlinear | |  | d. | periodic table |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 62. The scaling of the axes of a time-series graph:   |  |  |  | | --- | --- | --- | |  | a. | is not a critical element in presenting the intended information. | |  | b. | may change the visual interpretation of the data. | |  | c. | generally places the time period on the vertical axis. | |  | d. | generally puts values of a variable, such as the unemployment rate, on the vertical axis. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 63. In a time-series graph, large changes can be made to appear insignificant by:   |  |  |  | | --- | --- | --- | |  | a. | changing the scale of the axes. | |  | b. | labeling more intervals. | |  | c. | defining the dependent variable. | |  | d. | defining the independent variable. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 64. A scatter diagram shows:   |  |  |  | | --- | --- | --- | |  | a. | how far apart dependent variables are. | |  | b. | individual points of data showing both variable values. | |  | c. | the slope of a line. | |  | d. | the intercept of a curve. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 65. The fact that two variables always move together over time:   |  |  |  | | --- | --- | --- | |  | a. | does not prove that one variable is dependent on the other. | |  | b. | proves that one variable is dependent on the other. | |  | c. | proves that changes in one variable cause changes in the other. | |  | d. | is often illustrated using either a pie chart or a bar chart. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 66. A pie chart is used to present information about:   |  |  |  | | --- | --- | --- | |  | a. | the relative shares of categories of data. | |  | b. | changes in a particular variable over time. | |  | c. | positive, not negative, relationships among variables. | |  | d. | individual data points. |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 67. A bar graph:   |  |  |  | | --- | --- | --- | |  | a. | is useful in showing how a variable changes over time. | |  | b. | may utilize vertical bars to show the relative magnitudes of different observations of a variable. | |  | c. | is useful when the true direction of causality between two variables is reversed. | |  | d. | shows the percentages of a total amount that can be attributed to various components. |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 68. In looking at a chart that shows a positive relationship between the number of police officers and crime, the mayor remarks that more police officers cause more crime. The mayor may be wrong because she did not consider:   |  |  |  | | --- | --- | --- | |  | a. | features in the construction of the chart. | |  | b. | omitted variables. | |  | c. | reverse causality. | |  | d. | tangent lines. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 69. (Figure: Consumption of Slices of Apple Pie and Hamburgers) Use Figure: Consumption of Slices of Apple Pie and Hamburgers. The figure shows the number of hamburgers and slices of apple pie that Matt can eat in a day. The relationship is \_\_\_\_\_ and \_\_\_\_\_.  ​  ​   |  |  |  | | --- | --- | --- | |  | a. | nonlinear; positive | |  | b. | linear; positive | |  | c. | linear; negative | |  | d. | nonlinear; negative  ​ |  |  |  | | --- | --- | | *ANSWER:* | d | |

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| 70. (Figure: Consumption of Slices of Apple Pie and Hamburgers) Use Figure: Consumption of Slices of Apple Pie and Hamburgers. The figure shows the number of hamburgers and slices of apple pie that Matt can eat in a day. The best estimate of the slope of the curve between point *A* and point *D* is:  ​   |  |  |  | | --- | --- | --- | |  | a. | -3 | |  | b. | -1/3 | |  | c. | 3 | |  | d. | 1.3  ​ |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| 71. Which of the following has a constant slope?   |  |  |  | | --- | --- | --- | |  | a. | a linear curve | |  | b. | a time-series graph | |  | c. | a pie chart | |  | d. | a scatter diagram |  |  |  | | --- | --- | | *ANSWER:* | a | |

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| 72. The owner of the Eye of Wonder, one of five magic stores on Moonlight Road, asks you to make a graph showing the sales for each magic store on the street over the past 10 years. The BEST way to show this information is with a(n):   |  |  |  | | --- | --- | --- | |  | a. | scatter diagram. | |  | b. | pie chart. | |  | c. | time-series graph. | |  | d. | independent graph. |  |  |  | | --- | --- | | *ANSWER:* | c | |

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| 73. After a town hires more police officers, there is an increase in arrests. One can conclude that the larger police force caused more crime.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | b | |

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| --- | --- | --- |
| 74. An economist wishes to build a model to explain the relationship between the number of fancy watches purchased every year and the average income of consumers in that year. Which variable should be the dependent variable, and which should be the independent variable? All else equal, do you expect this relationship to be positive or negative? Explain.   |  |  | | --- | --- | | *ANSWER:* | The number of fancy watches purchased should be the dependent variable, and the average income of consumers should be the independent variable. It is much more reasonable to believe that income causes diamond purchases than the other way around. One would expect a positive relationship. As average income rises, all else equal, fancy watches become more affordable to more people, and so more fancy watches will be purchased. | |