NAME _____ DATE _____ PERIOD _____

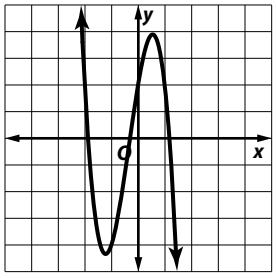
Test, Form 2B

Write the letter for the correct answer in the blank at the right of each question.

For Exercises 1 and 2, determine whether each relation is a function.

1. $\{(-2, 4), (0, 5), (2, 4), (3, 5), (-2, 1), (1, 4)\}$ **1.** no

2.



2. yes

3. The relation $\{(5, 0), (1, 9), (2, 4), (0, 3), (8, 6)\}$ is not a function when which ordered pair is added to the set?

A. $(-6, -8)$ **B.** $(2, 7)$ **C.** $(3, 0)$ **D.** $(9, 1)$ **3.** B

4. Which equation corresponds to the table of ordered pairs?

x	-4	8	12	16
y	-6	9	14	19

F. $y = \frac{4}{5}x - 1$ **G.** $y = x - 1$ **H.** $y = \frac{4}{5}$ **J.** $y = \frac{5}{4}x - 1$ **4.** J

5. What is the value of $f(-16)$ if $f(x) = 2x - 16$?

A. -48 **B.** -34 **C.** -16 **D.** 0 **5.** A

6. What is the slope of a sliding board that rises 2 feet for every horizontal change of 36 inches?

F. $\frac{1}{18}$ **G.** $\frac{1}{9}$ **H.** $\frac{2}{3}$ **J.** $\frac{2}{9}$ **6.** H

7. Find the slope of the line that passes through the points $A(-3, 1)$ and $B(2, -5)$.

A. -6 **B.** $-\frac{6}{5}$ **C.** $-\frac{5}{6}$ **D.** $-\frac{1}{6}$ **7.** B

8. The cost of gasoline varies directly with the number of gallons of gasoline purchased. If 4 gallons of gasoline cost \$16.80, what is the cost of 15 gallons of gasoline?

F. \$4.20 **G.** \$19.20 **H.** \$60.00 **J.** \$63.00 **8.** J

9. The number of feet varies directly as the number of inches x. Which equation can be used to convert x inches to y feet?

A. $y = 36x$ **B.** $y = 12x$ **C.** $y = \frac{1}{12}x$ **D.** $y = \frac{1}{36}x$ **9.** C

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Test, Form 2B *(continued)*

10. What is the constant rate of change between the quantities in the table?

Number of Cell Phones	4	8	12	16
Number of Text Messages (min)	24	48	72	96

F. 4 **G.** 6 **H.** 20 **J.** 24 **10.** G

11. Which equation has a slope of -7 and a y-intercept of 8?

A. $7x + y = 8$ **C.** $y = 7x - 8$

B. $8y + -7x = 1$ **D.** $y = -\frac{7}{8}x$ **11.** A

12. What is the slope of the line $x = -3$?

F. -3 **G.** 0 **H.** undefined **J.** 1 **12.** H

13. A hair salon serviced 24 customers in a day for a total profit of \$846. Hair cuts are \$22 and hair coloring is \$75. If none of the customers got both services, which system of equations represents this situation?

A. $h + c = 846$
$22h + 75c = 75$

C. $h + c = 24$
$22h + 75c = 846$

B. $24h + 22h = 846$
$24c + 75c = 846$

D. $h + 75c = 24$
$22h + c = 846$

13. C

14. The intersection point of the graphs of the following system of equations has an x-coordinate of 5 and a y-coordinate of 2. What information does this intersection point provide?

$$y - x = -3$$
$$x = 2.5y$$

F. the solution of the system **H.** the slope of the graphs

G. the constant rate of change **J.** the dependent variable **14.** F

15. What ordered pair is the solution to the system of equations?

$$-4x + y = -10$$
$$y = x + 2$$

A. (6, 8) **B.** (2, -2) **C.** (0, 2) **D.** (4, 6) **15.** D

16. A \$675 stereo receiver loses value at a rate of about \$18 per month. The equation $y = 675 - 18x$ represents the value of the receiver after x months. Identify and interpret the x- and y-intercepts. Explain how you can use the intercepts to help you graph the equation.

16. See Answer Key.

17. The profits in dollars from a tomato stand can be modeled by the equation $p(x) = 0.25x - 6.50$, where x represents the number of tomatoes sold. Find the y-intercept and explain what it represents in this problem.

17. (0, −6.5); Sample answer: If the tomato stand does not sell any tomatoes, they will lose \$6.50.