

Standardized Test

Name _____ Date _____

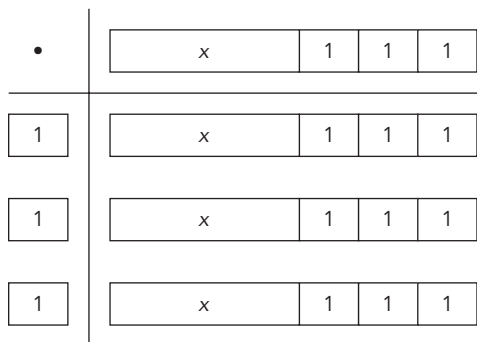
- Jen bicycles 180.2 miles every week. Which algebraic expression could you use to calculate the total number of miles Jen bicycles in w weeks?
 - $180.2 + w$
 - $180.2w$
 - $\frac{180.2}{w}$
 - $180w + 2$
- Which word expression represents the algebraic expression shown?
$$12 - 3x$$
 - twelve less than 3 times x
 - three x minus 12
 - three times x less than 12
 - twelve minus 3 plus x
- Evaluate $n^2 - 6$ if $n = 7$.
 - 1
 - 8
 - 8.2
 - 43
- Evaluate $24 \div (8 + 2^2)$.
 - 2
 - 3
 - 5
 - 7
- Kate has 48 softballs. She wants to divide them evenly among b softball bags. Which expression represents how many softballs she should put into each bag?
 - $\frac{48}{b}$
 - $48b$
 - $\frac{b}{48}$
 - $48 - b$
- Which algebraic expression represents the word expression "three times the square of a number, n , subtracted from 54?"
 - $3(54 - n^2)$
 - $3(n^2 - 54)$
 - $3n^2 - 54$
 - $54 - 3n^2$

7. Which property is shown?

$$18a \times 32b = 32b \times 18a$$

- a. Associative Property of Multiplication
- b. Commutative Property of Multiplication
- c. Distributive Property
- d. Identity Property

9. Which algebraic expression is represented by the model?



- a. $3(3x + 9)$
- b. $3x(x + 3)$
- c. $3(x + 3)$
- d. $3(x + 9)$

8. Hector, Sam, Ted, and Gina are comparing their savings. Hector saved twice as much money as Sam. Ted saved \$100 more than Hector. Gina saved \$50 less than Ted. Let x represent the amount of money Sam has in savings. Which algebraic expression represents the amount of money Gina has?

- a. $2x + 50$
- b. $2x - 50$
- c. $x + 150$
- d. $x - 50$

10. Simplify the algebraic expression

$$\frac{8x + 16y}{2} + 4(x - y).$$

- a. $8x + 12y$
- b. $8x + 7y$
- c. $8x + 4y$
- d. $12x + 4y$

- 11.** The recreation department is sending out flyers for the upcoming summer sessions. Marilyn and her three friends have already put labels on 200 flyers. Which simplified expression represents the number of flyers each girl will label if they share the work evenly? Let f represent the number of additional flyers.
- $100 + 4f$
 - $100 + \frac{f}{4}$
 - $200 + \frac{f}{4}$
 - $50 + \frac{f}{4}$

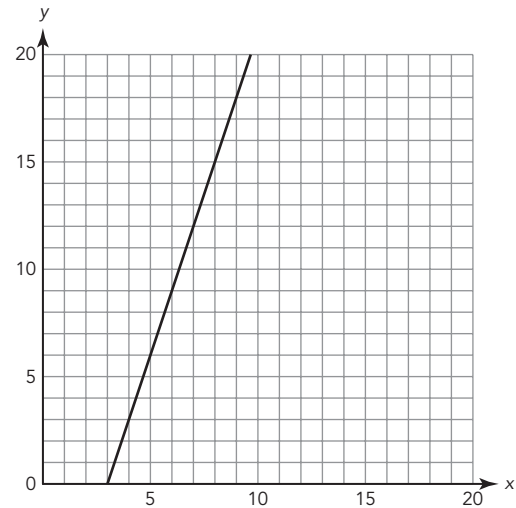
- 13.** Evaluate the expression $(7 - 3)3 + 4^2$.

- 14
- 16
- 20
- 28

- 12.** Marilyn, Sharon, and Rhonda collect earrings. Marilyn has one-half as many earrings as Sharon. Rhonda has 15 more earrings than Marilyn. Let x represent the number of earrings that Sharon has. Which algebraic expression represents the number of earrings Rhonda has?

- $x + 15$
- $0.5x + 15$
- $x - 15$
- $15 - 0.5x$

- 14.** The graph shown represents the equation $y = 3x - 9$.



Which equation also represents the line drawn on the graph?

- $y = 3(x - 9)$
- $y = \frac{1}{3}(x - 3)$
- $y = \frac{1}{3}(x - 27)$
- $y = 3(x - 3)$

- 15.** Using the Distributive Property, rewrite $2x + 16$ as a product of two factors.
- a. $2x + 8$
 - b. $2(16x)$
 - c. $2(x + 8)$
 - d. $2(x + 16)$
- 16.** Which expressions have a constant? Select all that apply.
- a. $3x^2$
 - b. $2x - 4$
 - c. $8x + y$
 - d. $5y$
 - e. $9xy$
 - f. $7 + 4x$
- 17.** Which pairs of expressions are equal? Select all that apply.
- a. $3(x + 2) + 4x$ and $7x + 6$
 - b. $6(x - 2) - 3x$ and $3x - 12$
 - c. $2(x + 3) + 2x$ and $4x + 3$
 - d. $5(x - 1) + 6$ and $5x + 5$
 - e. $8 + 4(x + 1)$ and $4x + 12$
 - f. $4 + 5(x - 2)$ and $3x + 4$
- 18.** Which exponential expressions are true? Select all that apply.
- a. $4 \cdot 4 = 2^4$
 - b. $(5 + 2)^3 = 5^3 + 2^3$
 - c. $8 \cdot 8 \cdot 8 \cdot 8 = 8^4$
 - d. $3 \cdot 3 \cdot 3 = 3^{27}$
 - e. $(6 - 1)^2 = 5^2$
 - f. $9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 = 9^6$
- 19.** Which expressions are equivalent to $4(x + 1) + 7(x + 3)$? Select all that apply.
- a. $4x + 1 + 7x + 3$
 - b. $4x + 4 + 7x + 21$
 - c. $11x + 25$
 - d. $x + 4 + x + 21$
 - e. $2x + 25$
 - f. $11x + 4$
- 20.** Which expression shows a "7" as a coefficient? Select all that apply.
- a. $4x - 7y$
 - b. $3x^7$
 - c. $2x - 7$
 - d. $7x + 8y$
 - e. $7(x + 9)$
 - f. $7 + 5x$