

Math 7 Unit 4A Pretest

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- C 1. Evaluate. $8g + 9$ for $g = -2$
- $$8(-2) + 9$$

$$-16 + 9$$

$$\underline{-7}$$
- a. 15 b. -16 c. -7 d. -25

- A 2. $\frac{(d+g)}{h}$ for $d = 35$, $g = 19$, and $h = 9$
- $$\frac{(35+19)}{9}$$

$$\frac{54}{9} = 6$$
- a. 6 b. 2.7 c. 7.3 d. 8

- A 3. Write an algebraic expression for the product of 7 coins and c coins.
- a. $7c$ b. $\frac{c}{7}$ c. $c+7$ d. $c-7$

- C 4. Write a word phrase for $p - 6$.
- a. the product of a number and 6 c. a number decreased by 6
- b. the sum of a number and 6 d. the quotient of a number and 6

- A 5. A major league baseball player chews 17 pieces of gum per game. Write an algebraic expression to show how many pieces of gum he might chew in n games.
- a. $17n$ b. $\frac{n}{17}$ c. $17 - n$ d. $n + 17$

Solve the equation. Show your work using algebra.

- B 6. $x - 8 = 17$
- $$\frac{+8 + 8}{x = 25}$$
- a. -9 b. 25 c. 9 d. -25

D ~~A~~ $\frac{z}{-9} = 10, -9$

$z = -90$

a. 90

b. 19

c. 1

d. -90

A 8. A tree was 4 feet tall. One year later, the tree was 11 feet tall. Write an equation and find how many feet the tree grew.

a. $4 + f = 11; 7 \text{ ft}$

c. $f - 4 = 11; 15 \text{ ft}$

b. $\frac{f}{11} = 4; 44 \text{ ft}$

d. $f + 11 = 4; -7 \text{ ft}$

Solve the equation using algebra.

A 9. $\frac{19x}{19} = \frac{38}{19}$

$x = 2$

a. 2

b. 722

c. $\frac{1}{2}$

d. $\frac{1}{722}$

D 10. $\frac{\frac{x}{-9} + 4}{-4} = 8$

$-9 \cdot \frac{x}{-9} = 11, -9$

$x = -36$

a. -108

b. -68

c. -76

d. -36

A 11. $8.8x + 3.7 = 91.7$

$$\begin{array}{r} 8.8x + 3.7 = 91.7 \\ -3.7 \quad -3.7 \\ \hline 8.8x = 88.0 \\ \hline 8.8 \quad 8.8 \\ \hline x = 10 \end{array}$$

$$\begin{array}{r} 8.8 \overline{) 88.0} \\ 88 \\ \hline 00 \\ \hline 00 \\ \hline 0 \end{array}$$

- a. 10 b. 10.8 c. 1 d. 11

Write an algebraic expression for the given phrase.

C 12. 8 inches wider than 10 times the length x of a table in inches

- a. $8x + 10$ b. $10x - 8$ c. $10x + 8$ d. $8x - 10$

Solve the equation using algebra.

B 13. $-3n + 5 + 3n = -59$

$$\begin{array}{r} -3n + 5 + 3n = -59 \\ -6n + 5 = -59 \\ \hline -6n = -64 \\ \hline n = 9 \end{array}$$

- a. -9 b. 9 c. 7 d. 10

C 14. Which problem situation best matches the equation $646 = 35x + 366$?

$$35x + 366 = 646$$

- a. The mechanic's bill to repair Mr. Wong's car was \$366. The mechanic charges \$35 an hour for labor, and the parts that were used cost \$646. How many hours did the mechanic work on the car?
- b. The mechanic's bill to repair Mr. Wong's car was \$366. The mechanic charges \$646 an hour for labor, and the parts that were used cost \$35. How many hours did the mechanic work on the car?
- c. The mechanic's bill to repair Mr. Wong's car was \$646. The mechanic charges \$35 an hour for labor, and the parts that were used cost \$366. How many hours did the mechanic work on the car?
- d. The mechanic's bill to repair Mr. Wong's car was \$646. The mechanic charges \$366 an hour for labor, and the parts that were used cost \$35. How many hours did the mechanic work on the car?

Short Answer

Simplify the expression. Circle your answer.

15. a) $7(2x+3)-3$

$$14x + 21 - 3$$

$$(14x + 18)$$

b) $10 + 4(5n + 2)$

$$10 + 20n + 8$$

$$(20n + 18)$$

c) $8x + 9 + 7x + 12$

$$(15x + 21)$$

d) $3m + 8 + 10m + 4$

$$(13m + 12)$$

Solve the equation by first using the Distributive Property.

16. a) $4(2x + 8) = 80$

$$\begin{array}{r} 8x + 32 = 80 \\ -32 \quad -32 \\ \hline \end{array}$$

$$\frac{8x}{8} = \frac{48}{8}$$

$$x = 6$$

b) $-4(3x + 8) = 16$

$$\begin{array}{r} -12x + -32 = 16 \\ +32 \quad +32 \\ \hline \end{array}$$

$$\frac{-12x}{-12} = \frac{48}{-12}$$

$$x = -4$$

Factor each expression using the GCF of the terms.

17. a) $8x + 24$

$$8(x + 3)$$

b) $6x + 22$

$$2(3x + 11)$$

Solve the equation using algebra.

18. $-10 = h + 46$

$$\begin{array}{r} -46 \quad -46 \\ \hline \end{array}$$

$$-56 = h$$

Solve the equation using algebra.

$$19. \left(\frac{b}{5} + 10\right) = 7$$

$$\begin{array}{r} \frac{b}{5} + 10 \\ -10 \quad -10 \\ \hline \end{array}$$

$$5 \cdot \frac{b}{5} = -2.5$$

$$b = -15$$

$$20. [5x + 11] = 26$$

$$\begin{array}{r} 5x + 11 \\ -11 \quad -11 \\ \hline \end{array}$$

$$\frac{5x}{5} = \frac{15}{5}$$

$$x = 3$$

Solve the equation using algebra.

$$21. 5(y - 4) = 15$$

$$\begin{array}{r} 5y - 20 = 15 \\ +20 \quad +20 \\ \hline \end{array}$$

$$\frac{5y}{5} = \frac{35}{5}$$

$$y = 7$$

Essay

22. A customer went to a garden shop and bought some potting soil for \$12.00 and 8 shrubs. If the total bill was \$108.00, how much did each shrub cost if they all cost the same? Write and solve an equation. Show your work.

s = cost of shrub

$$\begin{array}{r} 12 + [8s] = 108 \\ -12 \quad -12 \\ \hline \end{array}$$

$$\begin{array}{r} 8s = 96 \\ \div 8 \quad \div 8 \\ \hline \end{array}$$

$$s = \$12$$