

CHAPTER 3 | PRACTICE TEST

Expressions

Name _____

Date _____

Show organized work. Simplify fractions. Explain when asked.

1. For $-8x + 6 + 3x - 5y$, list the terms as written, the coefficients of the variable terms, the constant term, and the like terms.

2. Simplify: $14a + 9 - 5a - 16$.

3. Simplify: $\frac{5}{6}m - \frac{1}{4}m + \frac{7}{3}$.

4. A community baker pays a \$9 oven fee, a \$4 packaging fee, and \$2 per loaf. Write a simplified expression for the total cost of baking l loaves.

5. Find the sum: $(\frac{2}{5}p + 7) + (-\frac{1}{10}p - 12)$.

6. Find the difference: $(-2.8t + 4.6) - (1.3t - 7.2)$.

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7. A student writes $(8z - 5) - (-2z + 9) = 6z + 4$. Give the correct simplified expression and explain what went wrong.

8. A triangular glass frame has perimeter $(21u + 34)$ centimeters. Two sides together measure $(13u + 19)$ centimeters. Write a simplified expression for the third side length.

9. Expand: $-6(2v - 7)$.

10. Expand: $-\frac{3}{5}(20b + 15)$.

11. Simplify: $5(4k - 3) - 2(3k + 8)$.

12. Are $4(5q - 6) + 2q$ and $22q - 24$ equivalent? Justify your conclusion for every value of q .

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13. A rectangular stage riser is 7 feet wide and $(4s + 3)$ feet long. Write its area as a product and as a simplified expression. Include units.

14. Factor using the GCF: $30a - 45b + 75$.

15. Factor out the coefficient of w : $\frac{5}{8}w - \frac{15}{16}$.

16. Factor out -8 : $24j - 40$.

17. Six identical ice-cream carts cost $(114 + 54h)$ dollars to rent altogether for h hours. Factor the total to show the cost of one cart. Interpret both terms in the one-cart cost.

18. A rectangular community pond is 12 meters wide and has area $(48d + 84)$ square meters. Find simplified expressions for its length and perimeter. Include units.