Lesson 7 Practice Problems

1. For each expression, write an equivalent expression that uses only addition.

    a. $20 - 9 + 8 - 7$

    b. $4x - 7y - 5z + 6$

    c. $-3x - 8y - 4 - \frac{8}{7}z$

2. Use the distributive property to write an expression that is equivalent to each expression. If you get stuck, consider drawing boxes to help organize your work.

    a. $9(4x - 3y - \frac{2}{3})$

    b. $-2(-6x + 3y - 1)$

    c. $\frac{1}{5}(20y - 4x - 13)$

    d. $8(-x - \frac{1}{2})$

    e. $-8(-x - \frac{3}{4}y + \frac{7}{2})$

3. Kiran wrote the expression $x - 10$ for this number puzzle: "Pick a number, add -2, and multiply by 5."

    Lin thinks Kiran made a mistake.

    a. How can she convince Kiran he made a mistake?

    b. What would be a correct expression for this number puzzle?

4. Solve each equation.

    a. $5(n-4) = \text{-}60$

    b. $\text{-}3t + \text{-}8 = 25$

    c. $7p - 8 = \text{-}22$

    d. $\frac{2}{5}(j + 40) = \text{-}4$

    e. $4(w + 1) = \text{-}6$

(From Unit 3, Lesson 9.)

5. A map of a rectangular park has a length of 4 inches and a width of 6 inches. It uses a scale of 1 inch for every 30 miles.

    a. What is the actual area of the park? Show how you know.

    b. The map needs to be reproduced at a different scale so that it has an area of 6 square inches and can fit in a brochure. At what scale should the map be reproduced so that it fits on the brochure? Show your reasoning.

(From Unit 2, Lesson 7.)