Unit 5, Lesson 9
Practice Problems

1. Fill in the missing numbers in these equations

    a. $(-2) \cdot (-4.5) = ?$

    b. $(-8.7) \cdot (-10) = ?$

    c. $(-7) \cdot ? = 14$

    d. $? \cdot (-10) = 90$

2. A weather station on the top of a mountain reports that the temperature is currently $0°C$ and has been falling at a constant rate of $3°C$ per hour. Find each temperature. Explain or show your reasoning.

    a. If it continues fall at this rate, what will the temperature be:

        i. in 2 hours?

        ii. in 5 hours?

        iii. in half an hour?

    b. What was the temperature:

        i. 1 hour ago?

        ii. 3 hours ago?

        iii. 4.5 hours ago?

3. Find the value of each expression.

    a. $\frac{1}{4} \cdot (-12)$

    b. $(-\frac{1}{3}) \cdot 39$

    c. $(-\frac{4}{5}) \cdot (-75)$

    d. $(-\frac{2}{5}) \cdot (-\frac{3}{4})$

    e. $\frac{8}{3} \cdot (-42)$

4. To make a specific hair dye, a hair stylist uses a ratio of $1\frac{1}{8}$ oz of red tone, $\frac{3}{4}$ oz of gray tone, and $\frac{5}{8}$ oz of brown tone.

    a. If the stylist needs to make 20 oz of dye, how much of each dye color is needed?

    b. If the stylist needs to make 100 oz of dye, how much of each dye color is needed?

5. a. Here are the vertices of rectangle $FROG$: (-2, 5), (-2, 1), (6, 5), (6, 1). Find the perimeter of this rectangle. If you get stuck, try plotting the points on a coordinate plane.

    b. Find the area of the rectangle $FROG$.

    c. Here are the coordinates of rectangle $PLAY$:
       (-11, 20), (-11, -3), (-1, 20), (-1, -3). Find the perimeter and area of this rectangle. See if you can figure out its side lengths without plotting the points.