1-4 Additional Practice
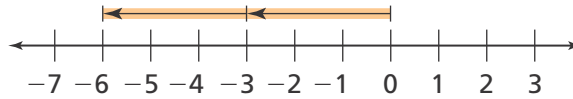
Leveled Practice In 1–3, fill in the boxes.

1. What subtraction expression does the number line model show?

$$-7\ -6\ -5\ -4\ -3\ -2\ -1\ \ 0\ \ 1\ \ 2\ \ 3$$

☐ − ☐

2. Complete the statement.

$7 - (-4)$ is ☐ units from 7 in the

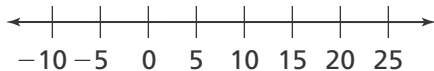☐ direction.

3. What is the value of the expression $-8 - (-3)$?

$-8 - (-3)$

$= -8$ ☐ 3

$=$ ☐

4. Julia is hanging birdhouses on her fence. The first birdhouse is 21 inches to the right of a red fence post. The second birdhouse is 29 inches to the left of the first birdhouse.

a. Use the number line below to represent this scenario. Let 0 on the number line represent the red fence post.

$$-10\ -5\ \ 0\ \ 5\ \ 10\ \ 15\ \ 20\ \ 25$$

b. What integer represents the location of the second birdhouse with respect to the red fence post? Write and evaluate an expression.

5. Hank is working in a silver mine 10 feet below the surface. He descends until he reaches a point 57 feet below the surface. How many feet does Hank descend?

6. Nora and Vera are trying to find the difference of $10 - (-3)$. Nora thinks the difference is 7. Vera claims the difference is 13. Who is correct? Explain.

7. An elevator starts at the main floor and goes up 8 floors. It then goes back down 5 floors. What integer represents the elevator's final position with respect to the main floor?

8. The highest temperature ever recorded in Chicago was 105°F, and the lowest was −27°F. Use absolute values to find the difference between the highest and the lowest temperatures.

9. Oliver is 8 feet above the surface of the water. There is a school of fish 10 feet below the surface. A ledge with some seashells is 18 feet below the surface, and even deeper there is a shipwreck 32 feet below the surface.

   a. How many feet will Oliver have to travel to get to the seashells?

   b. How much deeper is the shipwreck than the school of fish?

10. Find the difference.

    $63 - 93$

11. Find the difference.

    $-156 - (-45)$

12. Find the difference.

    $-4 - 5$

13. **Generalize** What is true about the sign of the difference when a positive integer is subtracted from a negative integer? © MP.8

14. **Higher Order Thinking** Stuart's best golf score is 4 under par, or –4. He wants to beat this score by 3 strokes. With one hole remaining, Stuart is 5 under par, or –5. What must his score be on the last hole to beat his best score? Explain your answer.

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15. Melissa and Brian are at the base of a mountain. Melissa hikes to a location 27 meters above sea level. Brian hikes to a location 21 meters below sea level.

    a. Write an integer to represent each hiker's location with respect to sea level.

    b. What is the difference of the hikers' altitudes?

    c. Can the integers be subtracted in either order to find the difference? Explain.