

1.4**Practice A**

In Exercises 1–4, simplify the expression.

1. $-|-2|$

2. $|-7| - |7|$

3. $|-3 \cdot 2|$

4. $\left| \frac{-15}{5} \right|$

In Exercises 5–12, solve the equation. Graph the solution(s), if possible.

5. $|r| = 5$

6. $|q| = -7$

7. $|b - 2| = 5$

8. $|k + 6| = 9$

9. $|-5p| = 35$

10. $\left| \frac{a}{3} \right| = 4$

11. $|8y - 3| = 13$

12. $|x + 4| + 7 = 3$

13. The minimum distance between two fence posts is 4 feet. The maximum distance is 10 feet.

- Represent these two distances on a number line.
- Write an absolute value equation that represents the minimum and maximum distances.

In Exercises 14–19, solve the equation. Check your solutions.

14. $|j| = |2j + 3|$

15. $|3f - 6| = |9f|$

16. $|b + 3| = |2b - 2|$

17. $|4h - 2| = 2|h + 3|$

18. $3|w - 5| = |2w + 10|$

19. $|2y + 5| = 3y$

20. Your friend says the absolute value equation $|2x + 9| + 7 = 3$ has two solutions because the constant on the right side of the equation is positive. Is your friend correct? Explain.

21. Describe a real-life situation that can be modeled by an absolute-value equation with the solutions $x = 5$ and $x = 10$.