Identify a, h, k, axis of symmetry, the vertex, domain, and range. Then Graph each function.

1. $y = |x - 4|$

2. $y = -3|x| - 2$

3. $y = -|3x| + 4$

4. $y = 5 - |x - 1|$

5. $y = \frac{1}{3}|2x - 9|$

Solve each equation graphically.

6. $|2x - 1| = 5$

7. $|t + 5| = 8$

Solve each equation algebraically. Check for extraneous solutions.

8. $|2t - 3| = 3t - 2$

9. $2|z + 1| - 3 = z - 2$

Solve each inequality and graph the solutions.

10. $|4 - x| - 15 > 21$

11. $|x + 4| - 10 \leq -2$

Solve each inequality graphically.

12. $2|x - 1| + 3 < 5$

13. $|x + 2| + 1 > 3$

Solve

14. The temperature at noon in Los Angeles on a summer day was 88 °F. During the day, the temperature varied from this by as much as 7.5 °F. Write and solve an absolute-value inequality to find the range of possible temperatures for that day.

15. The organizers of a drama club wanted to sell 350 tickets to their show. The actual sales were no more than 35 tickets from this goal. Write and solve an absolute-value inequality to find the range of the number of tickets that could have been sold.