



# 1-7 Additional Practice

## Absolute Value Equations and Inequalities

Solve each equation. Graph and check your solutions.

1.  $|b| = \frac{2}{3}$

2.  $10 = |y|$

3.  $|n| + 2 = 5$

4.  $4 = |s| - 3$

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

6.  $7|d| = 49$

Solve each equation. If there is no solution, write *no solution*.

7.  $|r - 9| = -3$

8.  $|c + 3| = 15$

9.  $1 = |g + 3|$

10.  $2 = \left| m + \frac{2}{3} \right|$

11.  $-2|3d| = 4$

12.  $-3|2w| = -6$

13.  $4|v - 5| = 16$

14.  $3|d - 4| = 12$

15.  $|3f + 0.5| - 1 = 7$

Solve and graph each inequality.

16.  $|x + 3| < 10$

17.  $|y + 4| > 12$

18.  $|y - 1| \leq 8$

19.  $\left| 2t + \frac{2}{3} \right| \leq 4$

20. In a sports poll, 53% of those surveyed believe their high school football team will win the state championship. The poll shows a margin of error of 0.5 percentage points. Write and solve an absolute value inequality to find the least and the greatest percent of people that think their team will win the state championship.