

Practice 4-3**Example Exercises****Example 1**

Use a number line to solve.

1. $|a| = 5$ 2. $|x| = 5.8$ 3. $|d| = 3.2$ 4. $12 = |k|$ 5. $8.2 = |n|$
 6. $|m| = 13$ 7. $\frac{3}{4} = |t|$ 8. $|w| = 6$ 9. $|u| = 8$ 10. $3\frac{3}{4} = |f|$

Example 2

Solve and check each equation. If there is no solution, explain.

11. $|v| + 2 = 7$ 12. $|d| - 15 = -7$ 13. $5|h| = 25$
 14. $8 = 12 + |s|$ 15. $\frac{|t|}{3} = 2$ 16. $36 = 9|r|$
 17. $-5 = \frac{|z|}{-5}$ 18. $\frac{1}{2} = \frac{|c|}{10}$ 19. $-3|y| = -27$
 20. $7 + |a| = 10$ 21. $-13 = |n| - 8$ 22. $7|m| = 35.7$

Example 3

Solve and check each equation. If there is no solution, explain.

23. $|d + 2| = 5$ 24. $|4f| = 24$ 25. $15 = |k - 3|$
 26. $8 = |2h|$ 27. $-9 = |3 + n|$ 28. $|6v| = 12$
 29. $|3z| + 7 = 10$ 30. $4|r - 4| = 12$ 31. $17 = 12 + |n + 2|$
 32. $|2c| - 17 = -11$ 33. $2|5 + d| = 14$ 34. $|4w| - 11 = -3$

Example 4

Model with an equation and solve.

35. The length of a metal rod was measured to be 25.5 cm. The measured length may vary from the actual length by 0.025 cm. Find the maximum and minimum actual lengths.
36. A scale may vary by 0.4 lb when weighing objects. If the reading on the scale is 125.2 lb, what are the maximum and minimum weights of the object?
37. The median score on a test was 84. The high and low scores vary from the median by 8. What are the high and low scores on the test?
38. One poll reported that the approval rating of the President of the United States was 63%. The poll was accurate to within 3.8%. What are the maximum and minimum approval ratings for the President?