



Practice Masters Level A
1.8 Solving Absolute-Value Equations and Inequalities

Match each statement on the left with a statement on the right.

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|-------------------------|-------------------------|
| 1. $ x - 3 = 5$ _____ | a. all real numbers |
| 2. $ x - 3 < 5$ _____ | b. $x < 8$ and $x > -2$ |
| 3. $ x - 3 > 5$ _____ | c. no solution |
| 4. $ x - 3 > -5$ _____ | d. $x > 8$ or $x < -2$ |
| 5. $ x - 3 = -5$ _____ | e. $x = 8$ or $x = -2$ |

Solve each equation. Graph the solution on the number line.

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|---------------------------|--|
| 6. $ x - 4 = 2$ _____ | |
| 7. $ 2x + 3 = 7$ _____ | |
| 8. $ 3 - 2x = 11$ _____ | |
| 9. $ 6x + 15 = 21$ _____ | |

Solve each inequality. Graph the solution on the number line.

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|------------------------------|--|
| 10. $ x + 6 > 1$ _____ | |
| 11. $ 3x - 5 \leq 10$ _____ | |
| 12. $ 5x < -1$ _____ | |
| 13. $ x - 10 \geq 15$ _____ | |

For Exercises 14–15, write an absolute-value inequality.

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| 14. $2x < 6$ and $-6 < 2x$ | 15. $10y - 12 < -10$ or $10y - 12 > 10$ |
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