

Algebra 1
Unit 3, Lesson 4 Notes
Equations Containing Absolute Value

Essential Question:

Vocabulary:

Absolute Value:

Extraneous Solution:

Review: Find the absolute value.

1) $|-2|$

2) $|4|$

3) $|4^2 - 3^3|$

4) $|7 + (-3)^2|$

Solving an equation containing absolute value $|ax + b| = c$ where $c > 0$:

1. Isolate _____ on one side of the equation.
2. Write two equations: _____ or _____.
3. _____ each equation.
4. _____ each solution in the original equation.

Examples: Solve the equations. Check for extraneous solutions.

1. $|x - 5| = 7$

2. $|2x + 12| = 4x$

3. $|x - 3| = 10$

4. $|3x - 2| = 13$

5. $|2x + 5| = 3x$

6. $|4x - 1| = 2x + 9$

7. $|x + 3| = -2$

8. $4|2x + 6| = 48$

9. $|5x + 2| - 4 = 13$

10. $|3x + 2| + 4 = 18$