Algebra 1 Notes   **Section 1-7: Solving Absolute-Value Equations**

*Objective:

Absolute value of a number is that number's distance from zero on a number line.

*Draw number line for |-5| = 5 and |5| = 5

*Absolute-Value Equations	
*Words	*Numbers
*Graph	*Algebra

To solve absolute-value equations, isolate the absolute value expression and consider two cases.

CHECK IT OUT! Solve each equation. Check your answer.	
1a. $|x| - 3 = 4$	**1b.** $8 = |x - 2.5|$

*Solving an Absolute-Value Equation

If an absolute-value expression equals 0, there is one solution.

If an equation states that an absolute value is negative, there are no solutions.

CHECK IT OUT! Solve each equation.

2a. $2 - |2x - 5| = 7$

2b. $-6 + |x - 4| = -6$

CHECK IT OUT! 3. Sydney Harbour Bridge is 134 meters tall. The height of the bridge can rise or fall by 180 millimeters because of changes in temperature. Write and solve an absolute-value equation to find the minimum and maximum heights of the bridge.

Inclass: p. 58 #44
Homework: p. 57-58 #15-41(odd)

Technology Lab – Solve Equations by Graphing (p. 31)