MasterMath

Name _____

Date _____

Solving Absolute Value Equations and Inequalities

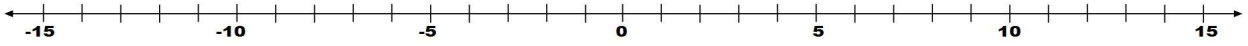
1. Solve for x:

	x =
$\|x + 4\| = 12$	
$2\|x - 3\| = 16$	
$\|x + 12\| + 3 = 14$	
$2\|x + 6\| - 6 = 16$	
$\|2x + 1\| = 1$	
$5\|x - 3\| = 15$	
$\frac{1}{3}\|x + 6\| = 18$	
$\frac{1}{4}\|x + 4\| = 3$	
$\|x + 4\| = 20$	

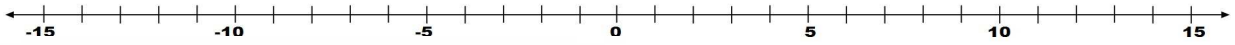
2. Solve for x:

	solution
$\|x + 4\| \geq 12$	
$2\|x - 3\| < 16$	
$\|x + 12\| + 3 < 14$	
$\|x + 6\| - 6 > 16$	
$\|2x + 5\| > 1$	
$5\|x - 3\| < 15$	
$\frac{1}{3}\|x + 6\| < 18$	
$\frac{1}{4}\|x + 4\| \leq 3$	
$\|x + 4\| < 20$	

3. Solve and graph: $2|x + 1| - 3 \geq 3$



4. The average monthly temperature in a northern Canadian city is 1 degree Fahrenheit. The actual January temperature for that city (t = actual temperature) is never more than 5 degrees Fahrenheit warmer or colder. Solve $|t - 1| \leq 5$ to find the range of temperatures. Graph the solution.



5. Solve and graph: $3|x + 2| > 6$