Absolute Value Hints and Helps

Absolute Value Equations

Normal Problems	
If you have:	$\|stuff\| = a$
Create Two Equations:	$stuff = a$ and $stuff = -a$
Then solve the two equations.	
You should get **Two Solutions.**	$x = n$ and $x = p$

Special Problems	
If you have:	$\|stuff\| = -a$
There are Zero **Solutions** because the absolute value of something will always be positive and **NEVER** equal to a negative number	

Another Special Problem	
If you have: $\|stuff\| = 0$	There is **One Solution** because there is no such thing as -0!

Absolute Value Inequalities

Special Problems Involving Less Than	
If you have:	$\|stuff\| < -a$
OR If you have:	$\|stuff\| < 0$
OR If you have:	$\|x\| < 0$
There will be **Zero Solutions** because the absolute value of something will **always** be positive and can **NEVER** be less than a negative number or less than zero.	
Another way to recognize this special solution is if you get a graph of $x < n$ *and* $x > m$ that points **OUT** instead of in.	

Normal Problems Involving Less Than	
If you have:	$\|stuff\| < a$
Create a compound inequality joined with the word '*and*'.	$stuff < a$ *and* $stuff > -a$
Solve the two inequalities.	$x < n$ *and* $x > m$
Graph the solution on a number line. You should have two arrows pointing towards each other. **(One Interval)**	