

Solving and Graphing Absolute Value Inequalities Notes

Steps:

1. Isolate the $| |$
2. Separate into two cases
3. Solve both cases
4. Graph both solutions on number line

Two Cases:

Case 1:
Keep it the same, drop the $| |$

Case 2:
Drop the $| |$
Switch the inequality
Switch the sign

Inverses Reminder:

Addition and Subtraction

Multiplication and Division

Examples:

$$|2x - 4| > 6$$

Case 1:

$$2x - 4 > 6$$

$$2x >$$

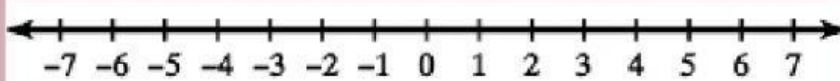
$$x >$$

Case 2:

$$2x - 4 < -6$$

$$2x <$$

$$x <$$



Graphing Tool Kit:



$$2|5x + 10| \leq 40$$

$$|5x + 10| \leq$$

Case 1:

$$5x + 10 \leq$$

$$5x \leq$$

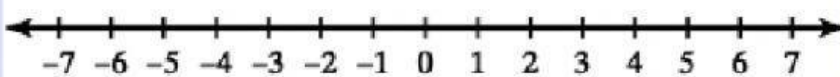
$$x \leq$$

Case 2:

$$5x + 10 \geq$$

$$5x \geq$$

$$x \geq$$



Graphing Tool Kit:

