

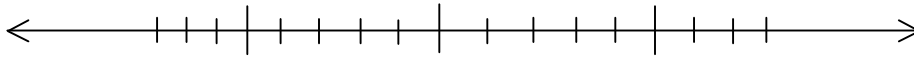
NOTES: SOLVE AND GRAPH INEQUALITIES

DAY 5

Textbook Chapter 1.6

Compound Inequality ():

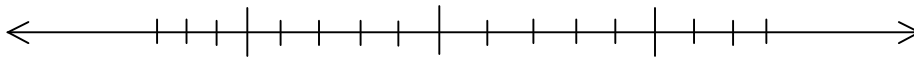
1. a. Create a situation with a range of possibilities (for example: my commute takes between 7 to 12 minutes, depending on traffic). Then graph your inequality.




- b. Write the situation as an inequality: _____

Disjoint Inequality ():

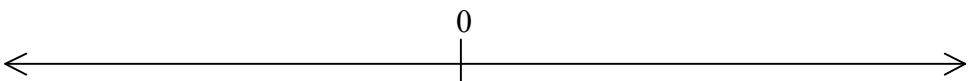
2. a. Graph all the values that you did not graph on the number line above.

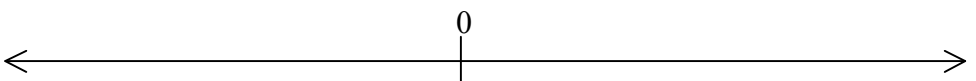


- b. Write your graph as one or more inequalities: _____

3. $3x - 4 \leq -16$ 

4. $-3(x + 2) \leq 15$ 

5. $-4 < x$ 

6. $2 < x - 3$ 

NOTES: SOLVING ABSOLUTE VALUE EQUATIONS

Textbook Chapter 1.7

1. Absolute Value Definition: _____

$$|x| = 7$$



2. Minimum Height:

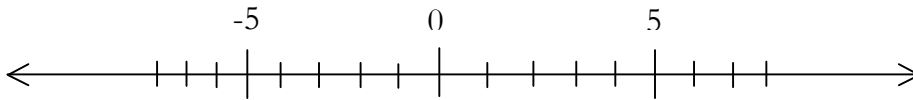
Maximum Height:

Write as absolute Value Equation:

4. Graph on Calculator.

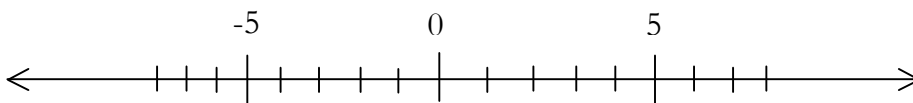
1. $|x| = 5$

Graph the solutions on this number line.



2. $|x - 3| = 5$

a. **Locate and Graph** the solutions on this number line.



b. **Write and Solve** two equations equivalent to $|x - 3| = 5$.

1.

2.

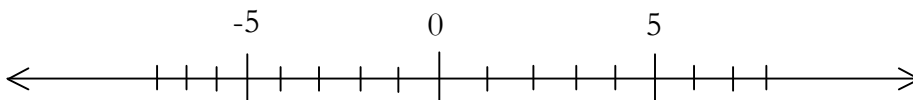
3. Graph, Solve, and Check the solutions to the following equations:

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

Check

1.

2.



Summarize: What does $|x - 89| = 5$ mean? How do you solve any absolute value equation?

PRACTICE

DAY 5

SOLVING ABSOLUTE VALUE EQUATIONS

Solve the absolute value equations.

6. $|x + 3| = 4$

7. $5|x + 2| - 20 = 0$

8. $|2x - 5| = 13$

9. $|2x + 4| = \frac{1}{4}x + 5$

10. Solve: $y = 3|x + 1| - 6$

11. Solve: $y = 2|x - 10| - 4$

