NAME _____ DATE _____

guided notes

Module 6 Solving Absolute Value Equations and Inequalities

Lesson 1 Solving Basic Absolute Value Equations

Lesson Objectives

- Understand the geometric and algebraic definitions of absolute value.
- Solve absolute value equations of the form $|ax + b| = k$ by rewriting them as compound equations.
- Identify and solve one solution and no solution absolute value equations.

The absolute value of a number is the distance from _____ to that number on a number line.

The absolute value of any nonzero number is _____.

The absolute value of 0 is _____.

$$|x| = \begin{cases} x, \text{ if } x \geq 0 \\ -x, \text{ if } x < 0 \end{cases}$$

If $|x| = 0$, then x _____.

1 Solve:

$|N| = 7$

_____

Solution Set: _____

2 Solve:

$|4y| = 12$

_____

Solution Set: _____

3 Solve:

$\left|\frac{z}{2}\right| = 1$

Solution Set: _____

4 Solve:

$|2I - 7| = 1$

Solution Set: _____

5 Solve:

$|7M - 1| = -4$

Solution Set: _____

6 Solve:

$|x + 5| = 0$

Solution Set: _____