

Algebra 2

0-03 Solve Absolute Value Equations and Inequalities

Absolute Values

- _____ from origin to coordinate
- In one dimension, turns the number _____
- $|x| = b$
 - Distance between _____ is b
- $|x - k| = b$
 - Distance between _____ is b

Steps to Solve Absolute Value Equations

1. Write _____ equations.
 - a. One with the absolute value expression _____.
 - b. One with the absolute value expression _____.
2. _____ each equation.
3. _____ your solutions.

Solve $|x - 3| = 10$

$|2x + 5| = 3x$

$|4x - 1| = 2x + 9$

Absolution Value Inequalities

- Solve absolute value inequalities the same as _____
- Exception: write answer as _____

Solve $|2x - 7| > 1$

$|7 - x| \leq 4$

- In manufacturing, _____ is the amount of allowed _____ between the _____ measurement and the _____.

$$|Actual - Standard| \leq Tolerance$$

Ostrich eggs have an average mass of 1950 grams, with a tolerance of 350 grams. Write and solve an absolute value inequality that describes the mass of ostrich eggs.