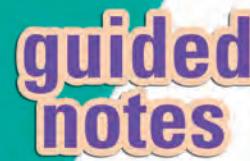


NAME _____

- Module 6** Solving Absolute Value Equations and Inequalities
Lesson 3 Solving Inequalities Using “Absolute Value is Less Than”



Lesson Objective

- Solve inequalities containing the absolute value expression “is less than” or the absolute value expression “is less than or equal to.”

The absolute value of x is the distance from zero to x .

The inequality $|x| < 5$ is equivalent to the conjunction $-5 < x < 5$.

The absolute value of an expression cannot be less than zero.

Solve and graph.

1) $|c| \leq 4$

$-4 \leq c \leq 4$



2) $|4p| < 20$

$-5 < p < 5$



3) $|k + 8| < -10$

\emptyset



4) $|x + 2| \leq 0$

$x = -2$



5) $1 \geq \left|2 - \frac{x}{3}\right|$

$3 \leq x \leq 9$



6) $4 + 4|x| < 20$

$-4 < x < 4$



7) $5 + |7j - 2| \leq 3$

\emptyset



