UBM06BLM/AK_61378 2/5/03 6:02 PM Page 191

NAME _____

Module 6 Solving Absolute Value Equations and Inequalities

Lesson 3 Solving Inequalities Using "Absolute Value is Less Than"

guided notes

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. $|k + 8| < -10$

   $\varnothing$

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

   $\varnothing$

© 2003 BestQuest

monotype composition 410-467-3300

UBM06BLM/AK_61378 2/5/03 6:02 PM Page 192

monotype composition
410-467-3300