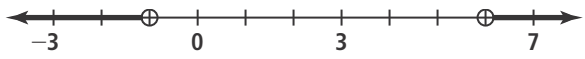
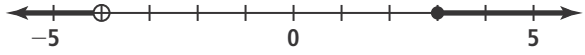
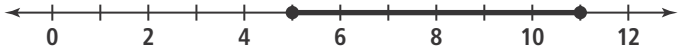
Name _____

1-6 Reteach to Build Understanding

Compound Inequalities

A solution of a compound inequality involving *and* includes any number that makes *both* inequalities true. A solution of a compound inequality involving *or* includes any number that makes *one or both* of the inequalities true.

1. Match the inequality with its graph.

Compound Inequality	Graph
$x < -4$ or $x \geq 3$	
$x \leq 11$ and $x \geq 5$	
$x \leq 4$ and $x > -1$	
$x < -1$ or $x > 6$	

Fill in the blanks to complete the inequality that represents each phrase.

2. All real numbers that are less than −3 or greater than or equal to 5.

$x <$ _____ _____ $x \geq$ _____

3. A certain recipe calls for a ham to bake between 30 minutes and 40 minutes, inclusive.

30 _____ x _____ 40

Write true or false.

4. −3 is a solution for the compound inequality $b \leq 4$ and $b > -1$. _____

5. 3 is a solution for the compound inequality $-3 < c < 2$ _____

6. Libby solved and graphed $5x + 6 > 16$ or $x - 6 \leq -9$. Describe and correct the error Libby made graphing the solution to the compound inequality.

$5x + 6 > 16$ $\quad x - 6 \leq -9$

$5x > 10$ $\quad x \leq -3$

$x > 2$