

Name: _____

Date: _____

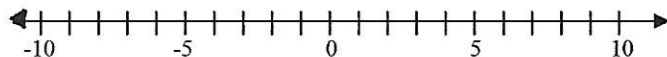
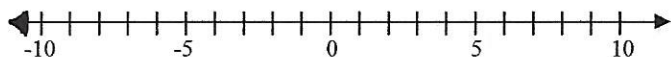
MORE WORK WITH COMPOUND INEQUALITIES
COMMON CORE ALGEBRA I HOMEWORK

FLUENCY

1. Graph each of the following compound inequalities on the number lines provided. If its an AND statement write the inequalities as a single statement.

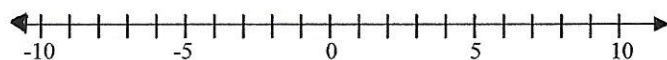
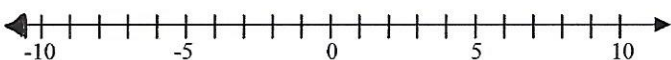
(a) $x > 5$ or $x \leq 3$

(b) $x \geq -7$ and $x < 10$



(c) $x \leq 3$ or $x < -6$

(d) $x < 3$ and $x > -5$



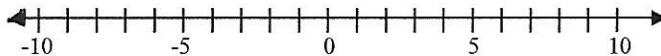
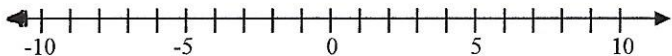
2. Graph each of the following. First, rewrite as two inequalities involving the AND connector.

(a) $-7 \leq x < 5$

(b) $-2 \leq x \leq 6$

Two Inequalities: _____

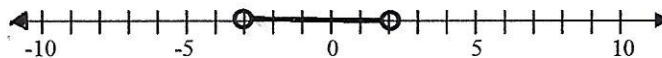
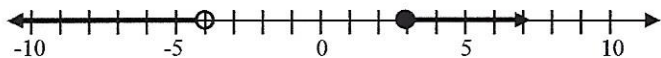
Two Inequalities: _____



3. For each of the following graphs, write a compound inequality that describes all of the numbers shown on the graph.

(a) Compound Inequality: _____

(b) Compound Inequality: _____

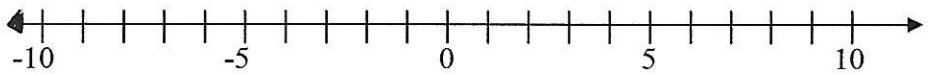


REASONING

4. Consider the compound inequality given by:

$$-2 \leq \frac{1}{2}x + 2 \text{ and } \frac{1}{2}x + 2 < 3$$

Solve this compound inequality and graph the solution on the number line. Write the solution set as a single algebraic statement.



5. Consider the compound inequality: $-7 \leq 2x - 5 < 7$

(a) Using the skills you have learned today, rewrite the following inequality using the AND connector?

(b) Solve the compound inequality you found in part (a) and graph the solution on the number line. Rewrite your answer as a single statement.



(c) Using the skills above, try and simplify the following inequality. Graph the solution on the number line and rewrite your answer as a single statement.

$$-3 \leq 3x + 3 < 2x + 10$$

