

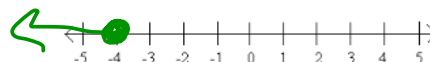
Name: _____ Algebra 9 Unit 2 Lesson 10

Compound Inequalities

DO NOW ~ Wednesday 12/4

Solve and graph the following inequality: $-3y \geq 12$

$$\begin{array}{r} -3y \geq 12 \\ \div -3 \quad \div -3 \\ y \leq -4 \end{array}$$

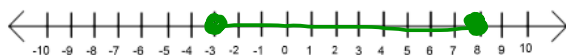


Classwork

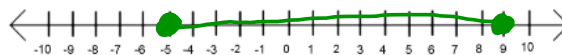
Graph the following compound (more than one) inequalities.

AND
(SMOOSH)

$$-3 \leq x \leq 8$$



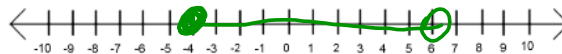
$$-5 \leq x \leq 9$$



$$-5 < x \leq 4$$



$$-4 \leq x < 6$$



To earn your full participation point for the Do Now be sure to have completed all of the following by the time is up:

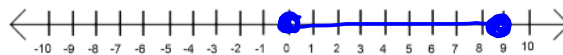
- 1) Be in your seat
- 2) Take out your calculator
- 3) Have last night's homework out
- 4) Complete the do now



DO NOW ~ Thursday 12/5

Graph the following compound inequality:

$$0 \leq x \leq 9$$



Classwork

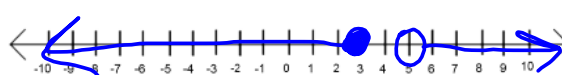
Graph the following compound (more than one) inequalities.

$$2 < x \text{ OR } x > 8$$

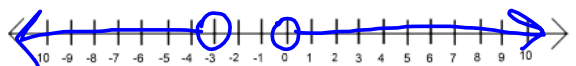
$$x > 2$$



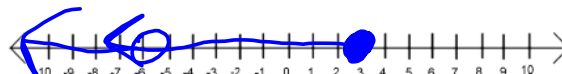
$$x > 5 \text{ or } x \leq 3$$



$$x < -3 \text{ or } x > 0$$



$$x \leq 3 \text{ or } x < -6$$

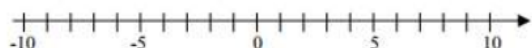


Mrs. Ferreri's Station ~ Compound Inequalities

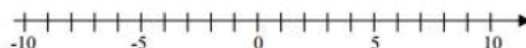
Graph the following compound inequalities.

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

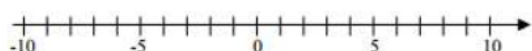
(a) $x > 5$ or $x \leq 3$



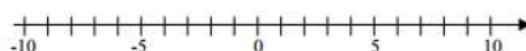
(b) $x \geq -7$ and $x < 10$



(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.

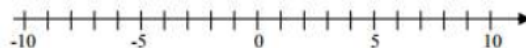
(a) $-7 \leq x < 5$

Two Inequalities: _____



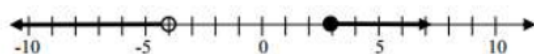
(b) $-2 \leq x \leq 6$

Two Inequalities: _____

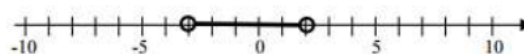


3. For each of the following graphs, write a compound inequality that describes all of the numbers shown on the graph.

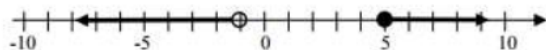
(a) Compound Inequality: _____



(b) Compound Inequality: _____



Which of the following compound inequalities is shown graphed below?



(1) $-1 \leq x < 5$

(3) $x < -1$ or $x \geq 5$

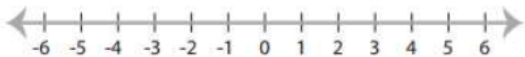
(2) $-1 < x \leq 5$

(4) $x \leq -1$ or $x > 5$

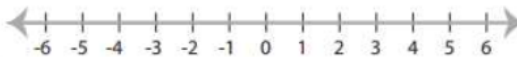
Continue onto the next page.

Graph.

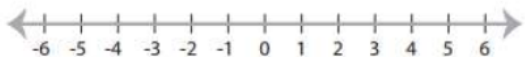
1) $x \leq 0$ or $x > 2$



2) $x > -1$ and $x < 3$



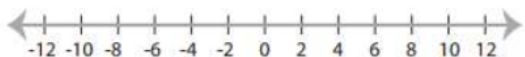
3) $-4 < x \leq 4$



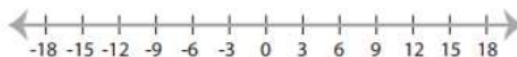
4) $x \geq 5$ or $x \leq -6$



5) $10 > x > -8$



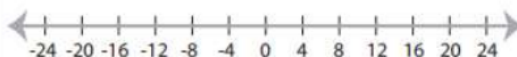
6) $x < 9$ and $x \geq 3$



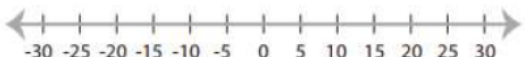
7) $x \leq -2$ and $x \geq -5$



8) $x \geq 12$ or $x < -16$



9) $x > 10$ and $x < 20$



10) $-3 \leq x < 1$



Computer Station ~ No Computer...Graphing Inequalities Instead

Graph the following inequalities.

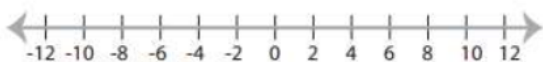
1) $x \geq -2$



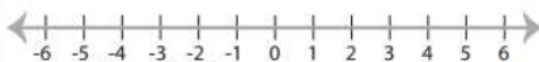
2) $x < 5$



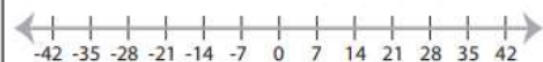
3) $x \leq 6$



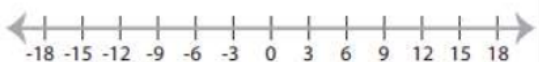
4) $x > 1$



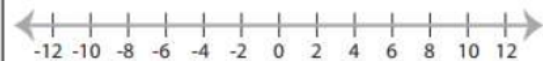
5) $x < -14$



6) $x \leq 9$



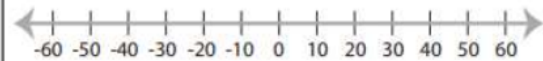
7) $x > -2$



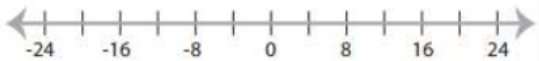
8) $x \geq -15$



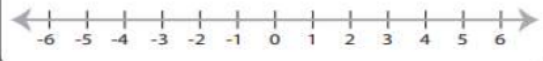
9) $x \leq -10$



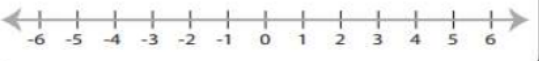
10) $x > 16$



11) $x > -1$



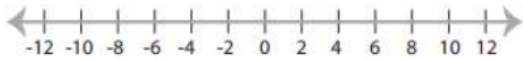
12) $x \geq -3$



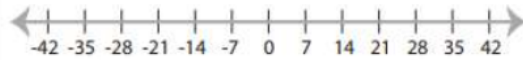
Continue onto the next page.

Solve and graph the following inequalities.

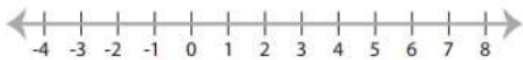
1) $x - 2 > 4$



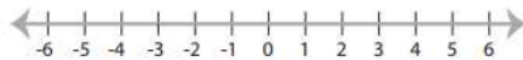
2) $\frac{x}{3} \leq 7$



3) $6x < 30$



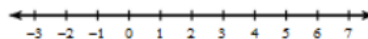
4) $x + 9 \geq 11$



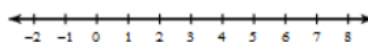
Mrs. Kennedy's Station ~ Solve and Graph Inequalities

Solve each inequality and graph the solution.

$$6(-8 - 5x) + 6 > -192$$



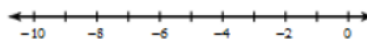
$$147 < 7(5k + 1)$$



$$150 \leq -3(-8 - 6x)$$

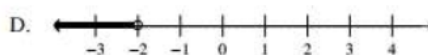
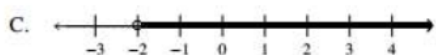
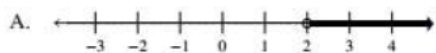


$$8(1 - 5n) + n < 242$$

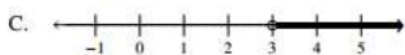
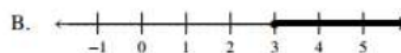


Independent Station ~ More Inequality work

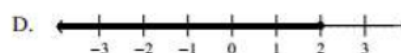
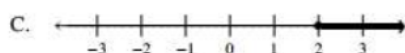
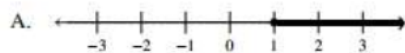
1. Which graph represents the solution set of the inequality $4x > -8$?



2. Which graph represent the solution of the inequality $2x + 3 > 9$?



3. Which graph represents the solution set of $2x + 1 \geq 3$?



Continue onto the next page.

4. Which inequality is represented by the graph?

A. $x > -1$

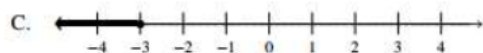
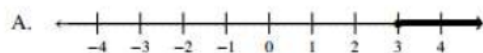
B. $x \leq -1$

C. $x < -1$

D. $x \geq -1$



5. Which graph represents the solution of the inequality $-3x + 1 \leq 10$?



6. Which inequality is represented by the graph?

A. $x > -1$

B. $x < -1$

C. $x \geq -1$

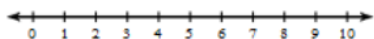
D. $x \leq -1$



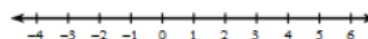
Homework ~ Wednesday 12/4

Solve and graph the following inequalities.

$$90 \leq 3(8x + 6)$$



$$n - 6 + 1 > -2$$



Graph the following compound inequalities.

$$-4 \leq x < 9$$



$$5 \leq x \leq 7$$



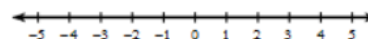
Homework ~ Thursday 12/5

Solve and graph the following inequalities.

$$-6(-7 - 2r) > 90$$

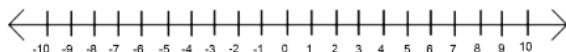


$$-5 - 8n - 7n \geq 10$$



Graph the following compound inequalities.

$$-3 < x < 0$$



$$0 < x \leq 7$$



