GreatHearts®

Algebra 9:

April 14 - 17

Time Allotment: 40 minutes per day

Student Name: _____

Teacher Name: Mrs. Hudson

Melanie.Hudson@GreatHeartsNorthernOaks.org

Chapter 10: Inequalities

Packet Overview

Date	Objective(s)	Page Number
Monday, April 13	No school -- Holiday	
Tuesday, April 14	Chapter 10-7 Continued: Be able to graph linear inequalities in two variables.	2 - 5
Wednesday, April 15	Chapters 10-8: Be able to graph the solution set of two linear inequalities in two variables.	6 - 8
Thursday, April 16	Chapter 10: Review sections 1-8 **Quiz Tomorrow, Friday, April 17th on 10-1 through 10-8**	9 - 12
Friday, April 17	**Chapter 10 Quiz: Sections 1-8**	13 - 15

Additional Notes:

- **Materials:** Printed packet or notebook paper; pencils. (Calculators not needed).
  - **Note:** If you are using notebook paper, be sure to write the pages and numbers of the material.
  - **Example:** P. 6; #1) _____
- **Answers are given at the end of each assignment.**
- **Quiz:** Located on pages 13-15. This should be taken ***without*** looking at previous work. No answers are provided for the test.

Academic Honesty

I certify that I completed this assignment independently in accordance with the GHNO Academy Honor Code.

Student signature:

_____

I certify that my student completed this assignment independently in accordance with the GHNO Academy Honor Code.

Parent signature:

_____

Algebra Unit: Inequalities

Unit Overview: Inequalities

We are now starting Chapter 10, Inequalities. In this chapter, you will:

1) Review the concept of order and to graph inequalities in one variable,
2) Transform inequalities in order to solve them,
3) Solve problems that involve inequalities,
4) Find the solution sets of combined inequalities,
5) Solve equations with inequalities involving absolute value,
6) Extend your skill in solving open sentences that involve absolute value,
7) Graph linear inequalities in two variables,
8) Graph a solution set of a system of two linear inequalities in two variables.

Monday, April 13

No School -- Holiday

Tuesday, April 14

Algebra Unit: Inequalities

Lesson 10-7 Continued: Absolute Value in Open Sentences

Objective: Be able to graph linear inequalities in two variables.

- Welcome back! Today is just review of what we were working on last week.
- Open your text to p. 493. Study the even numbers and complete/correct the odd numbers.

- **See next page!**

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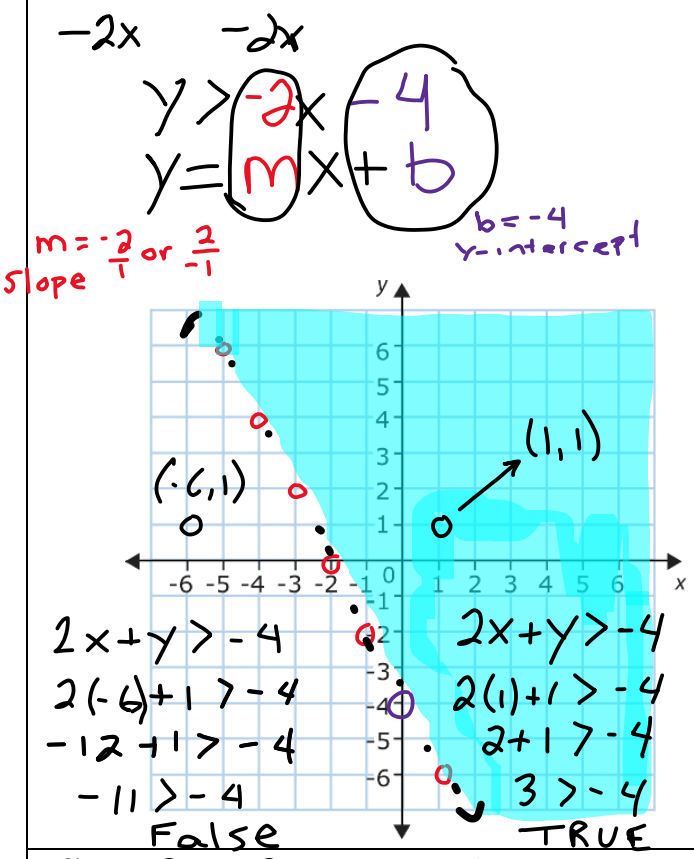
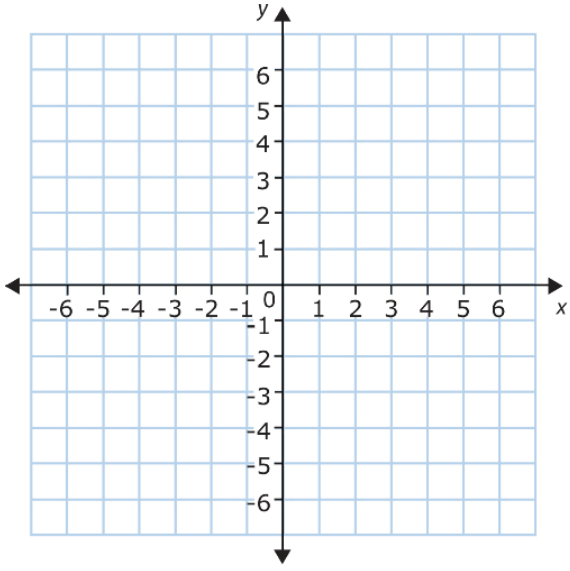
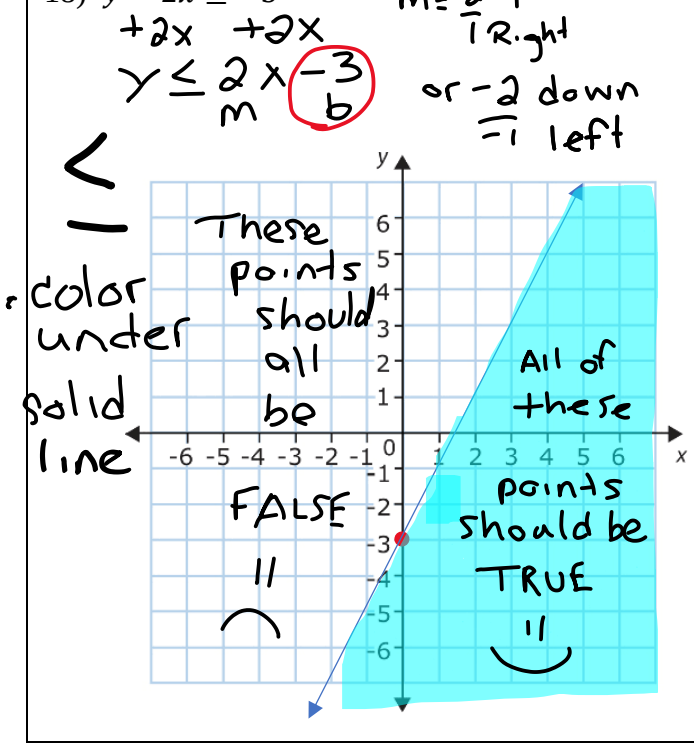
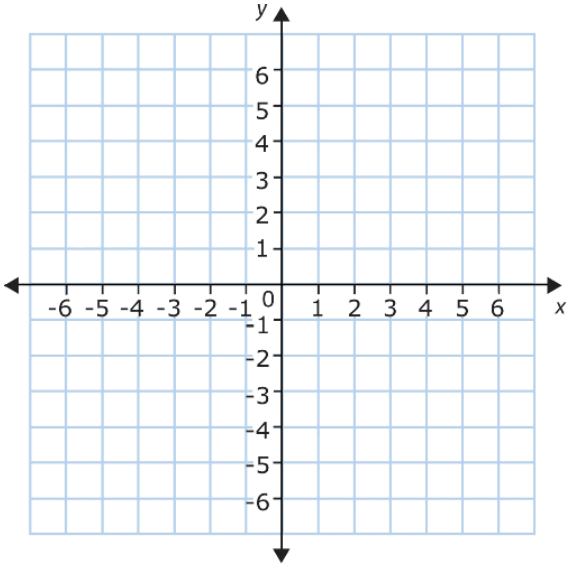
Examples	Practice (Check answers in back of text).
16) $2x + y > -4$ 	17) 
18) $y - 2x \leq -3$ 	19) 

20) $3y - 2x < 0$

$+2x \quad +2x$

$\frac{3y}{3} < \frac{2x}{3}$

$y < \frac{2}{3}x$

$y < \frac{2}{3}x + 0$

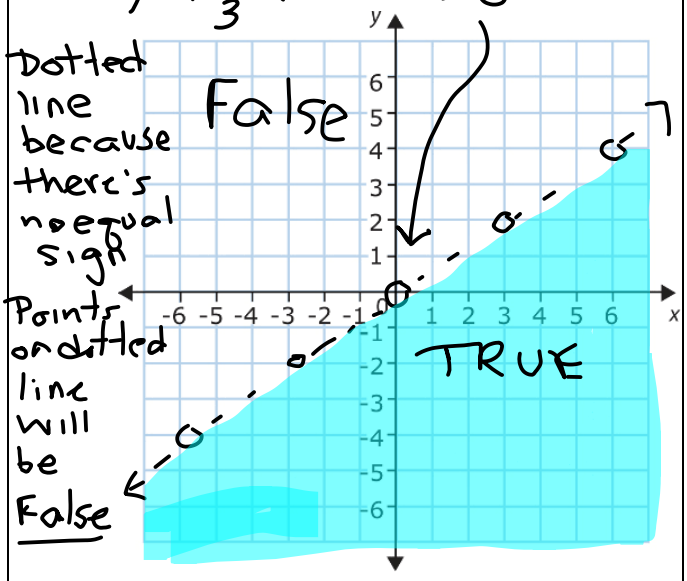
$m = \frac{2}{3}$ or $\frac{-2}{-3}$

$b = 0$

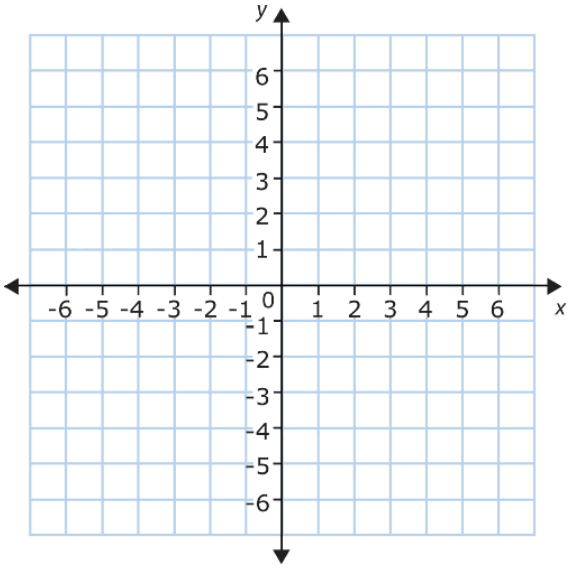
Dotted line because there's no equal sign

False

Points on dotted line will be False



21)



22) $3y - 1 > 2x - 7$

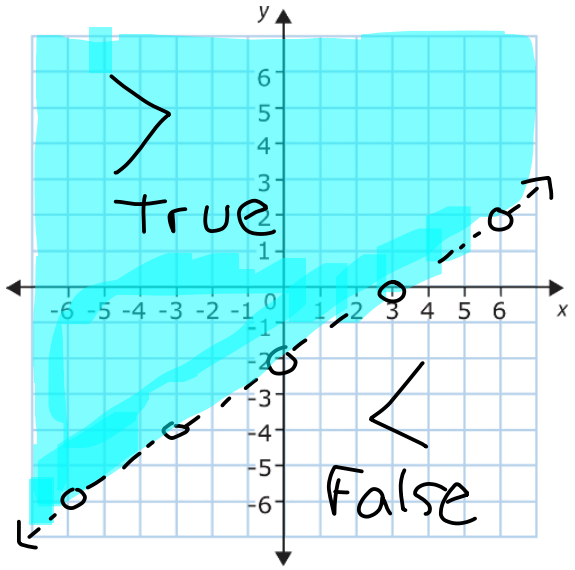
$+1 \quad +1$

$\frac{3y}{3} > \frac{2x - 6}{3}$

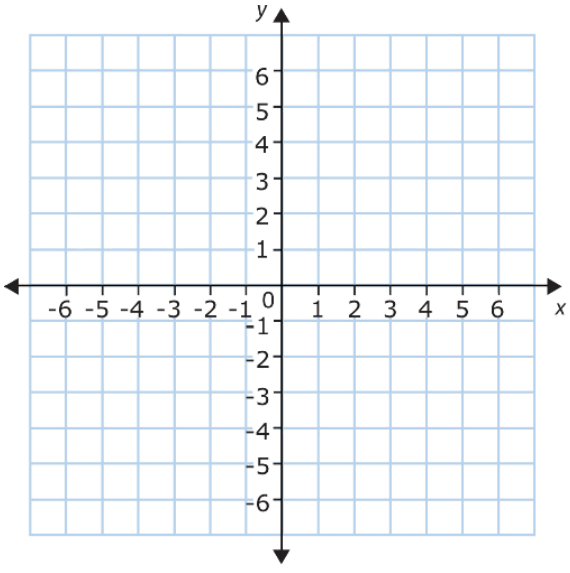
$y > \frac{2}{3}x - 2$

$m = \frac{2}{3}$ or $\frac{-2}{-3}$

$b = -2$



23)



24) $5y - 8 < 2(x + 2y)$

$5y - 8 < 2x + 4y$

$-4y \quad -4y$

$y - 8 < 2x$

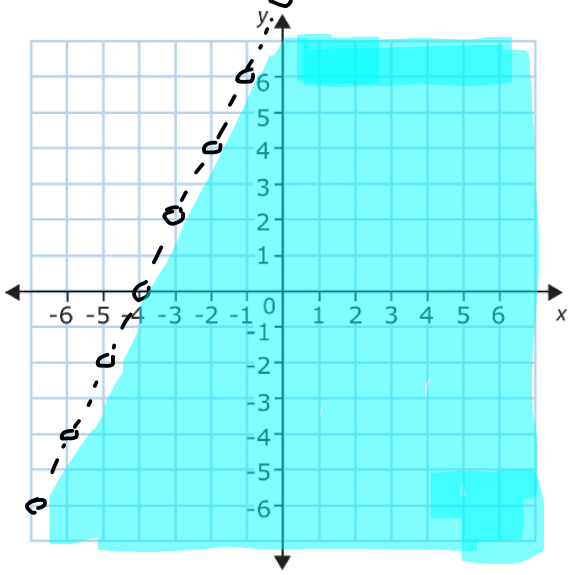
$+8 \quad +8$

$y < 2x + 8$

$m = \frac{2}{1} = \frac{-2}{-1}$

$b = 8$

0 ← cops



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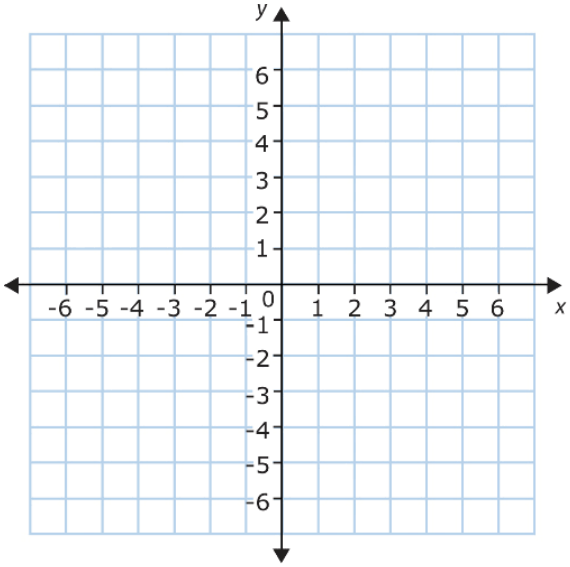


30)

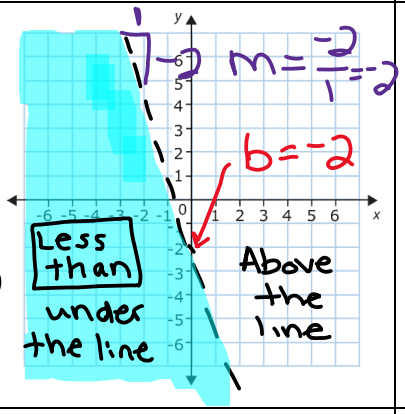
$m = -2$

$b = -2$

$y = mx + b$

$y < -2x + (-2)$

$y < -2x - 2$



29)

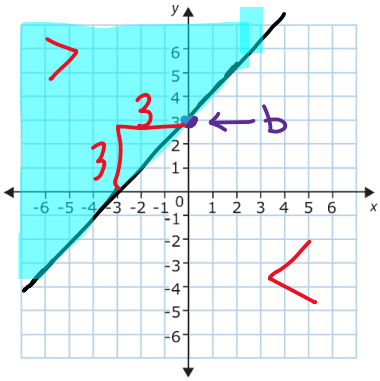
32)

$m = \frac{3}{3} = 1$

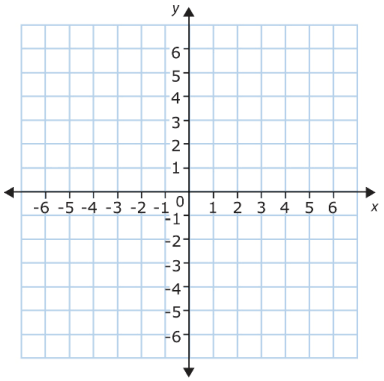
$b = 3$

$y \geq 1x + 3$

$y \geq x + 3$



31)



Remember to check your answers in the back of your book!

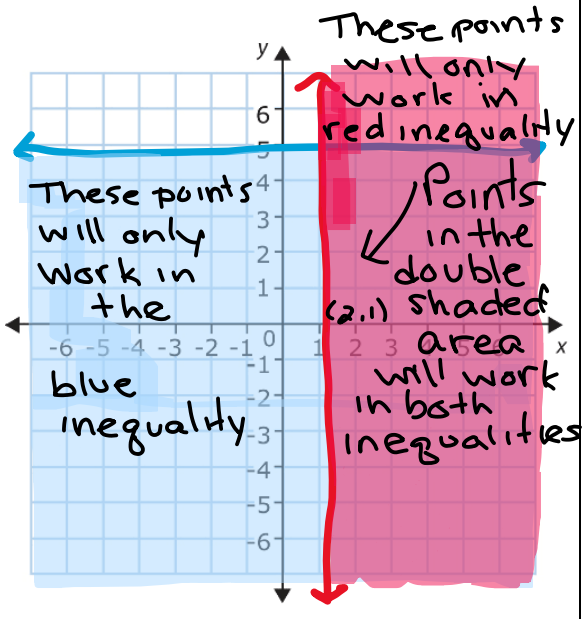
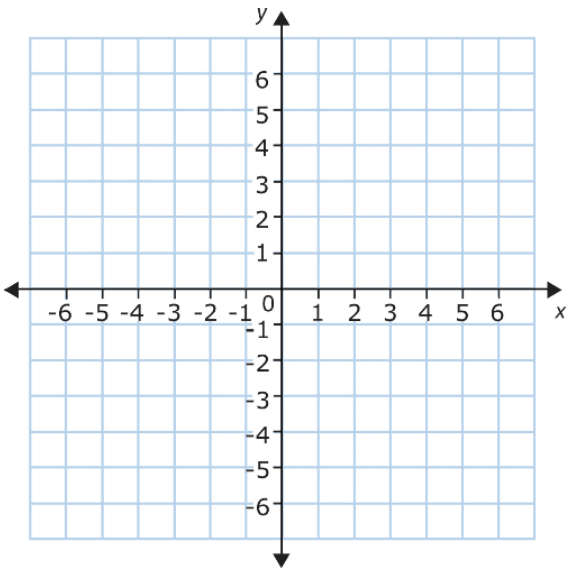
Wednesday, April 15

Algebra Unit: Inequalities

Lesson 10-8: Systems of linear equations.

Objective: Be able to graph the solution set of two linear inequalities in two variables.

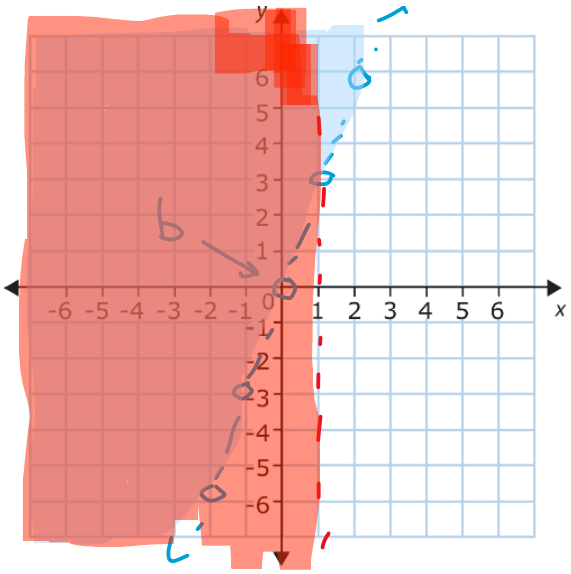
- This section is very similar to 10-7. The only change is that you will graph TWO inequalities. The correct section will be where BOTH REGIONS are shaded.
- I will show you a few. See page 496.

Examples	Practice (Check answers!)
2) $y \leq 5$ $x \geq 1$ Check answer (2,1) $y \leq 5$ $x \geq 1$ $1 \leq 5$ $2 \geq 1$ True True  	3) Colored pencils are useful for these 

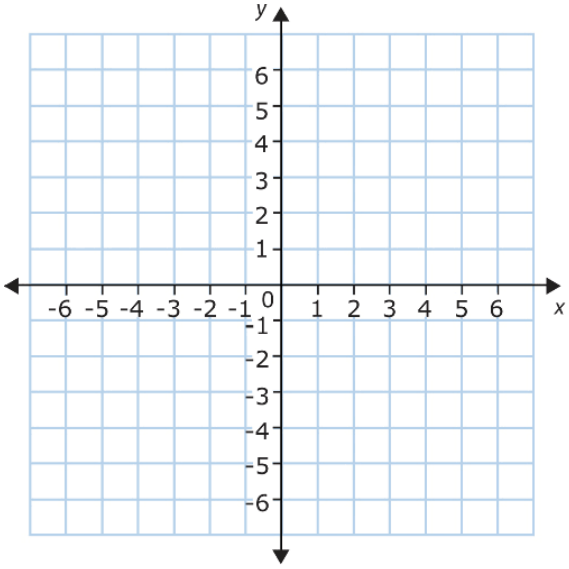
6) $y > 3x$ .... $y > 3x + 0$ .... m = 3 b = 0

$x < 1$

$\frac{3}{1}$ or $\frac{-3}{-1}$

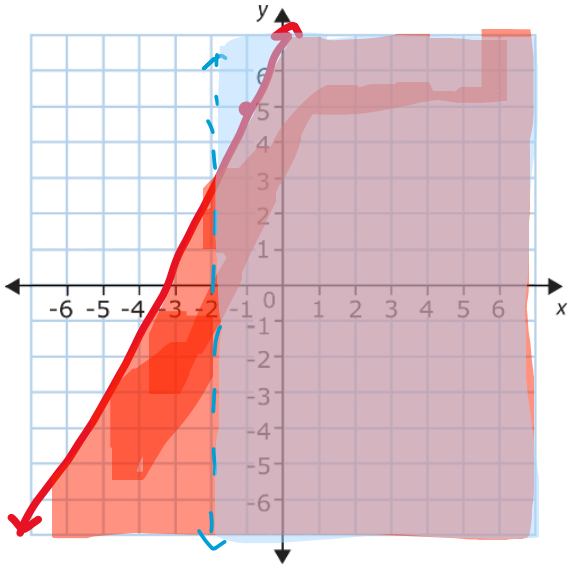


5)

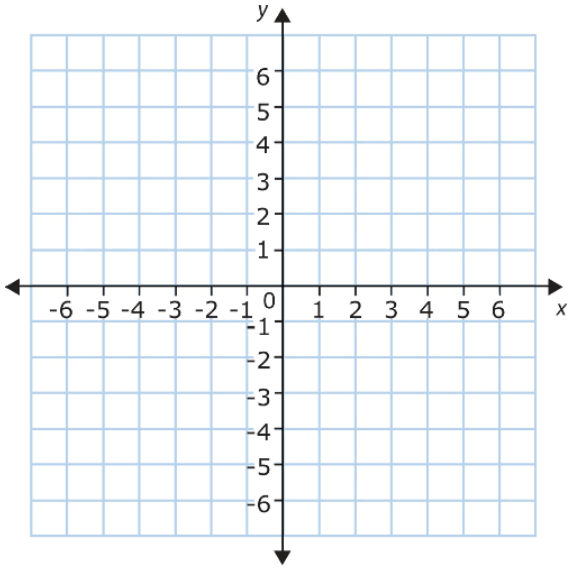


8) $x > -2$

$y \leq 2x + 7$ ... $m = \frac{2}{1}$ or $\frac{-2}{-1}$ $b = 7$

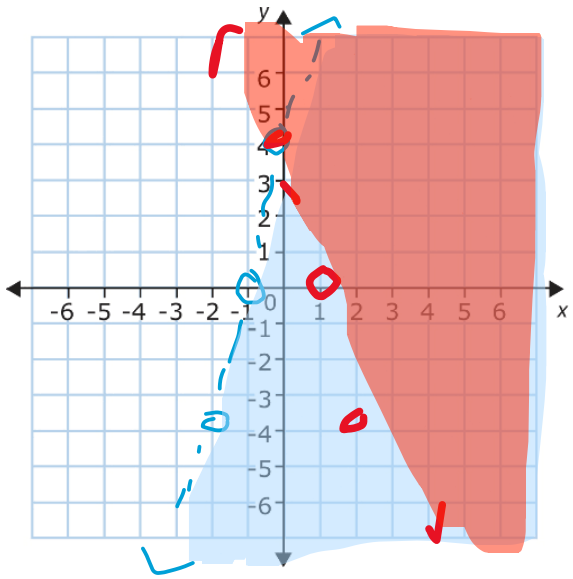


7)

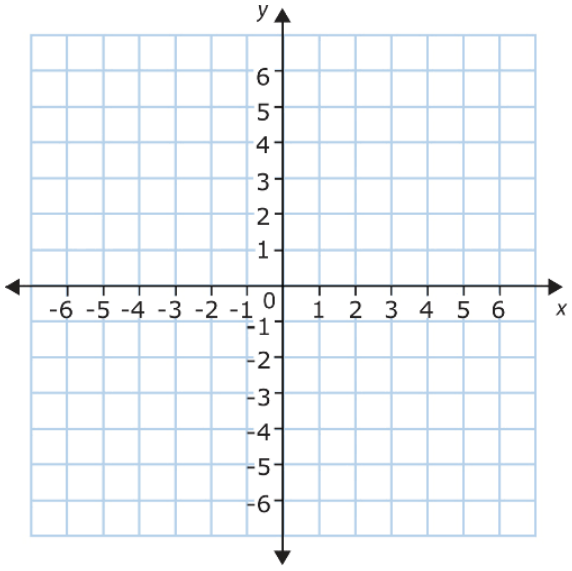


10) $y < 4x + 4$..... m = $\frac{4}{1}$ *or* $\frac{-4}{-1}$ .... $b = 4$

$y > -4x + 4$ .... $m = \frac{-4}{1}$ *or* $\frac{4}{-1}$ ... $b = 4$



9)



I hope that you enjoyed the coloring! Remember, LESS THAN is when you color under the line, GREATER THAN is when you color above the line. The points in the DOUBLE COLORED section will work in BOTH equations.

CHECK YOUR ANSWERS!!!

See you tomorrow!

Thursday, April 16

Algebra Unit: Inequalities

Lesson: Review 10:1-8: Inequalities

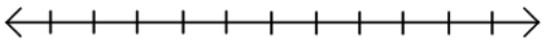
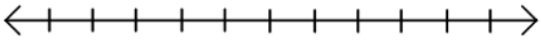
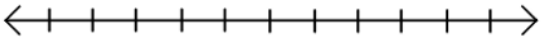
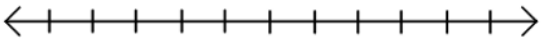
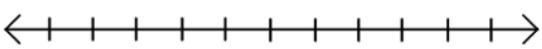
Objective: Be able to solve inequalities, solve combined inequalities, solve equations and inequalities involving absolute value, solve and graph linear inequalities, and graph systems of linear inequalities.

- Page 501 – 502: Chapter Review … Be sure to notice the numbers that I have assigned.

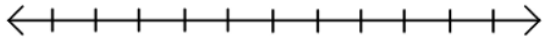
1)	3)
4)	6)
7)	10)
11)	

Answers: 1) C 3) C 4) B 6) A 7) B 10) B 11) B
CONTINUE…

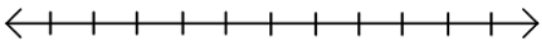
- Page 502: Chapter Test… Again, check the numbers that I placed in the boxes.

1)	3) 
5) 	6) 
7) 	8) 

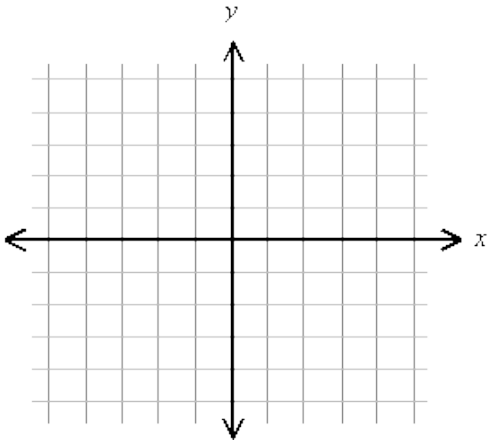
9)



10)



11)



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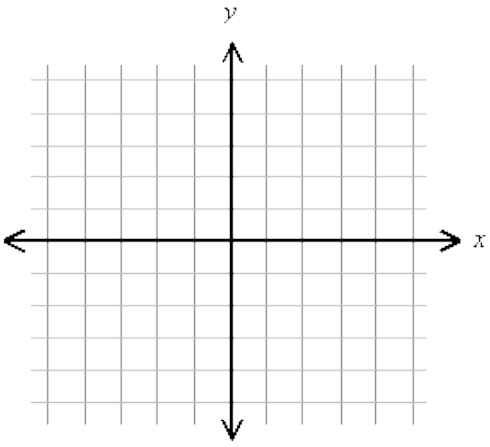
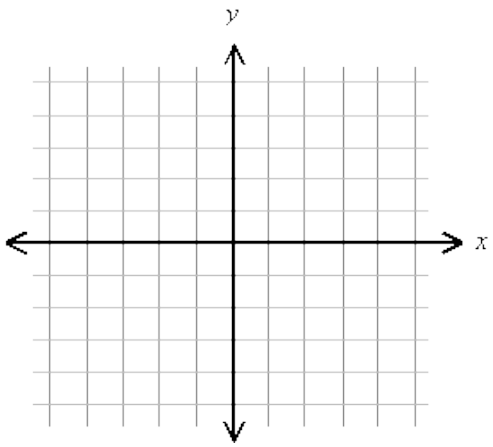


13)

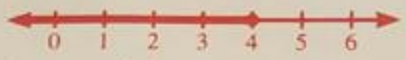


Answers:

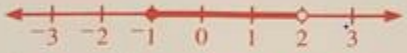
Chapter Test

1. Classify the statement as true or false: $4 > -\frac{1}{2} > -2$. True

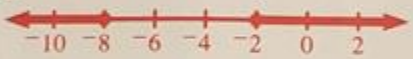
3. {the real numbers less than or equal to 4}



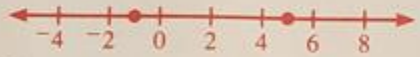
5. {−1 and the real numbers between −1 and 2}



6. {−8, −2, and the real numbers less than −8 or greater than −2}

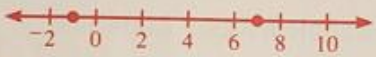


7. {−1, 5}

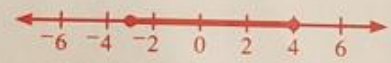


8. {the real numbers between −13 and 11}

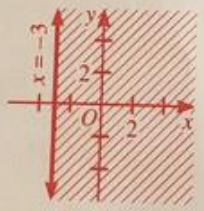
9. {−1, 7}



10. {−3, 4, and the real numbers between −3 and 4}

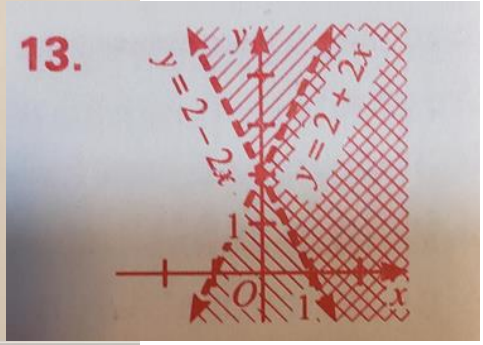


11.



12.

13.



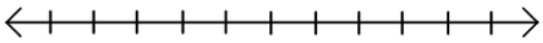
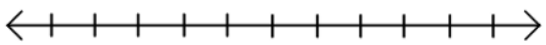
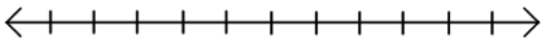
Friday, April 17

Algebra Unit: Inequalities

Lesson: QUIZ 10:1-8: Inequalities

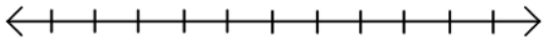
Objective: Be able to solve inequalities, solve combined inequalities, solve equations and inequalities involving absolute value, solve and graph linear inequalities, and graph systems of linear inequalities.

- Hello! Time for a quiz.
- Please put everything away except for a pencil and this page or a piece of notebook paper.
- Take your time 😊!
- BOX YOUR ANSWERS!

1) True or False? $-10.5 < -10 < -9$	2) Solve the inequality and graph its solution set. $4x < -20$ 
3) Solve the inequality and graph its solution set. $\frac{m}{3} - 5 > -2$ 	4) Solve each open sentence and graph its solution set. $-4 \leq 3x - 1 < 5$ 

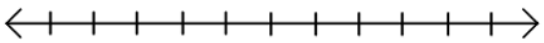
5) Solve each open sentence and graph its solution set.

$$x - 2 < -5 \; or \; x - 2 \geq 4$$



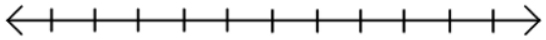
6) Solve each open sentence and graph its solution set.

$$|v - 6| = 3$$



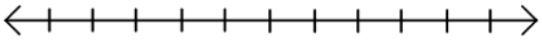
7) Solve each open sentence and graph its solution set.

$$|5x - 3| = 17$$



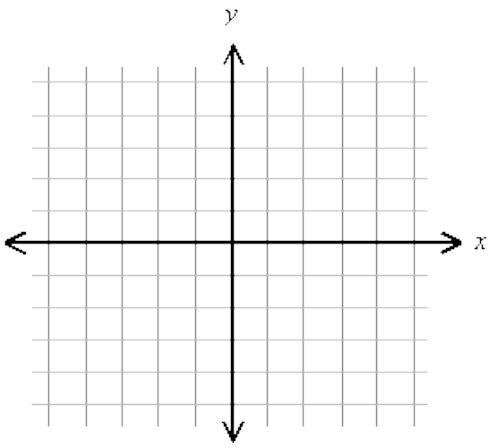
8) Solve each open sentence and graph its solution set.

$$|y + 5| > 2$$



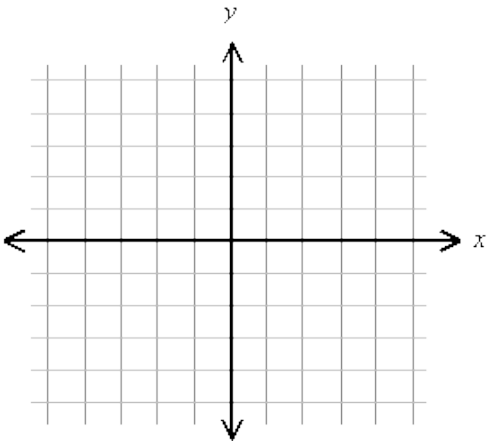
9) Graph each inequality.

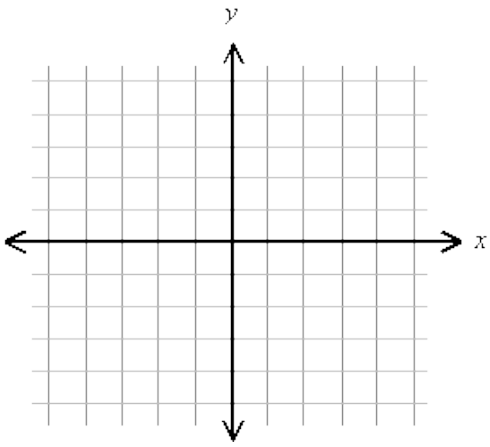
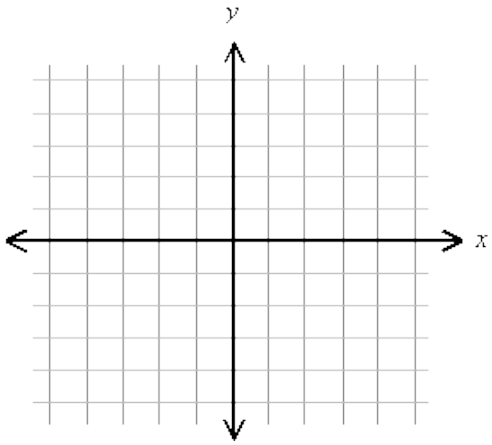
$$x < 3$$



10) Graph each inequality.

$$y \geq -2x + 1$$



11) Solve for Y then graph the inequality.	12) Graph and shade the pair of inequalities.
$x - y \geq 2$	$y < x + 3$ $\quad$ $y > 3 - x$
	

You did it!!! Have a great weekend!