

## Ch. 12 - Board Problems

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FIND SLOPE, INTERCEPT, EQUATION OF A LINE FOR THE FOLLOWING PAIRS OF POINTS.

①  $(3, 3)$   $(0, 5)$

②  $(3, -4)$   $(-1, 4)$  ← <sup>Hard</sup>

PUT BOTH EQUATIONS INTO STANDARD FORM.

## Algebra I - Ch. 12

## Systematic Review: Conversions

$$1 \text{ mi} = 1.6 \text{ km}$$

$$1 \text{ mi} = 5280 \text{ ft}$$

$$1 \text{ ton} = 2000 \text{ lbs}$$

$$1 \text{ quart} = 2 \text{ pints}$$

$$1 \text{ pint} = 2 \text{ cups}$$

$$4 \text{ quarts} = 1 \text{ gallons}$$

$$16 \text{ ou} = 1 \text{ lb}$$

1)  $5 \text{ mi} = \underline{\hspace{2cm}} \text{ km}$

2)  $3 \text{ km} = \underline{\hspace{2cm}} \text{ mi}$

3)  $3 \text{ qt} = \underline{\hspace{2cm}} \text{ cups}$

4)  $3 \text{ cups} = \underline{\hspace{2cm}} \text{ qt}$

5)  $3 \text{ lb} = \underline{\hspace{2cm}} \text{ ou}$

6)  $49 \text{ ou} = \underline{\hspace{2cm}} \text{ lb}$

7)  $500 \text{ lb} = \underline{\hspace{2cm}} \text{ ton}$

8)  $3 \text{ ton} = \underline{\hspace{2cm}} \text{ lb}$

9)  $5280 \text{ mi} = \underline{\hspace{2cm}} \text{ yd}$

10)  $8.5 \text{ mi} = \underline{\hspace{2cm}} \text{ feet}$   
 $\quad \quad \quad = \underline{\hspace{2cm}} \text{ yds}$

# NOTES Ch. 12

# GRAPHING INEQUALITIES

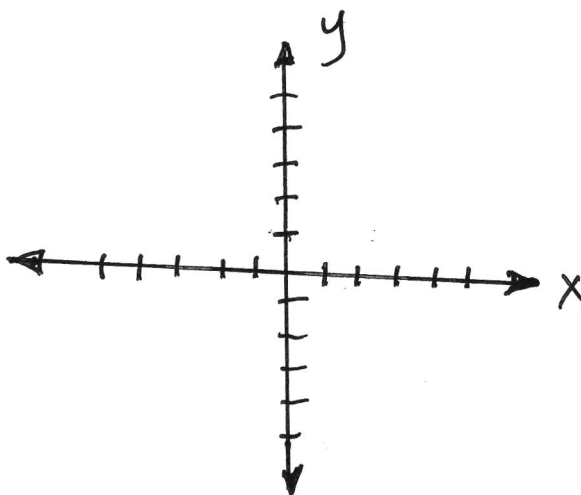
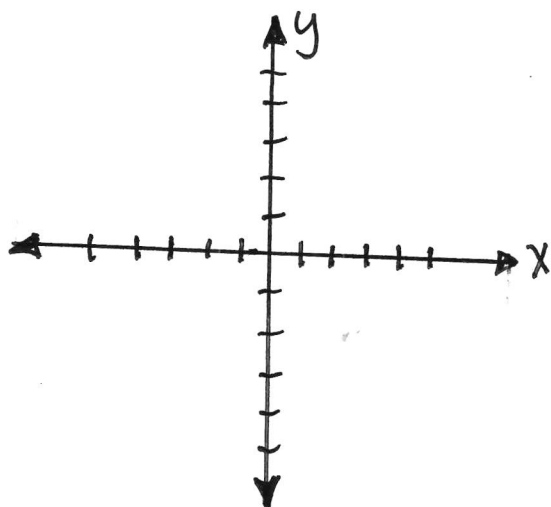
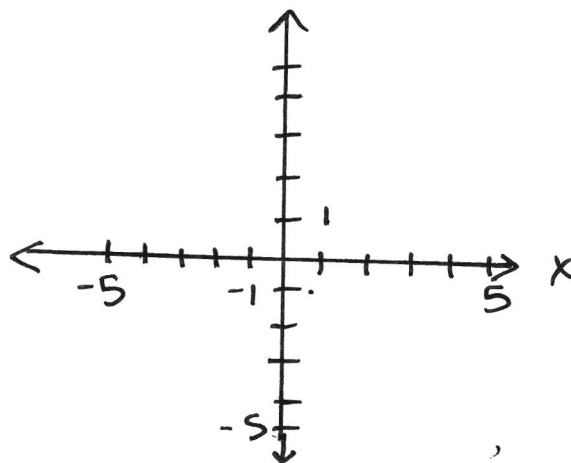
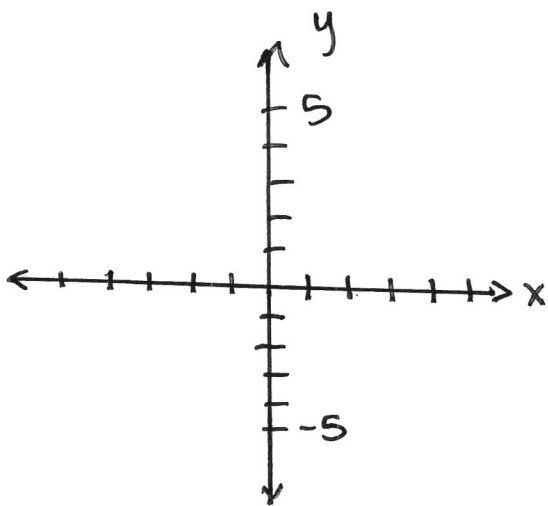
$$y > 2x - 3$$

$$y < 2x - 3$$

$$y \geq 2x - 3$$

$$y \leq 2x - 3$$

$$y = 2x - 3$$



# NOTES Ch. 12

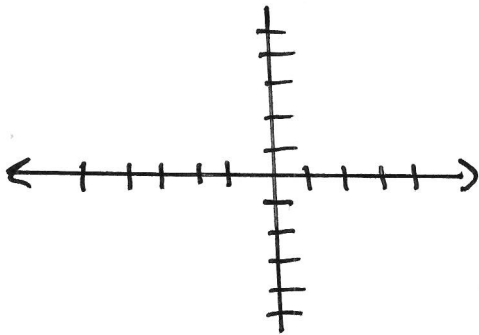
$$-2y \geq 3x + 6$$

What do you do first?

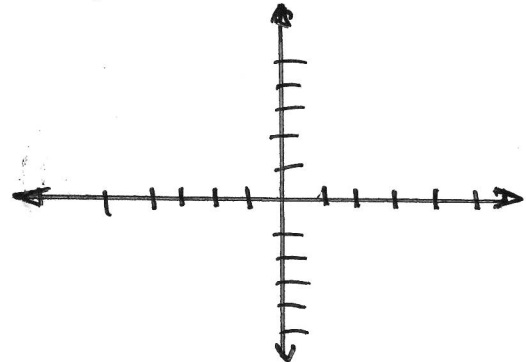
RULE : \_\_\_\_\_

## GRAPH

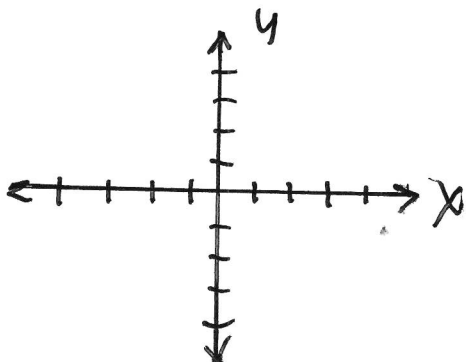
1)  $y > -\frac{2}{5}x - 4$



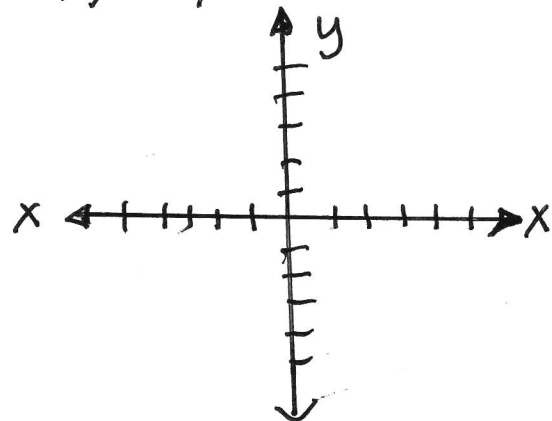
2)  $x \geq 4$



3)  $3x - 4y > 4$



4)  $y \leq -1$



## LESSON PRACTICE

Follow the steps to graph each inequality.

**For #1-4**      $3Y \leq X + 9$

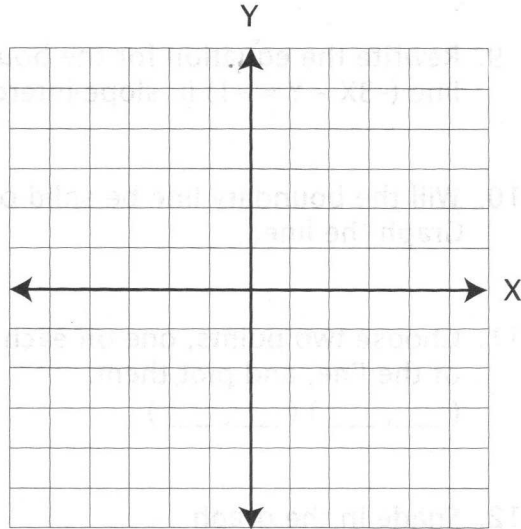
1. Write the equation for the line that will form the boundary, and then rewrite it in slope-intercept form.

$3Y = X + 9$  in slope-intercept form  
is  $Y = \frac{1}{3}X + 3$ .

2. Will the boundary line be solid or dotted?  
Graph the line.

3. Choose two points, one on each side of the line, and plot them.  
( \_\_, \_\_ ) ( \_\_, \_\_ )

4. Shade in the graph.



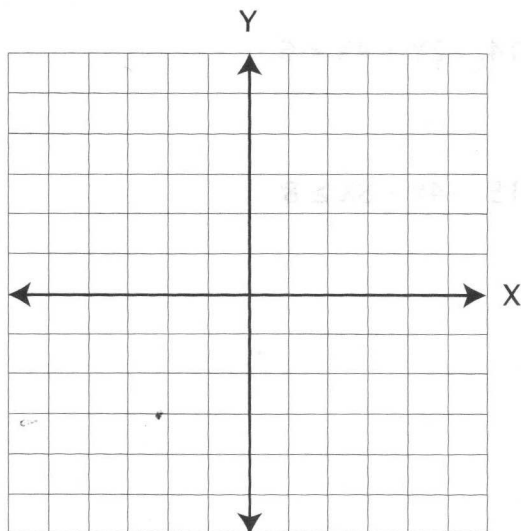
**For #5-8**      $2Y > -X - 4$

5. Rewrite the equation for the boundary line ( $2Y = -X - 4$ ) in slope-intercept form.

6. Will the boundary line be solid or dotted?  
Graph the line.

7. Choose two points, one on each side of the line, and plot them.  
( \_\_, \_\_ ) ( \_\_, \_\_ )

8. Shade in the graph.



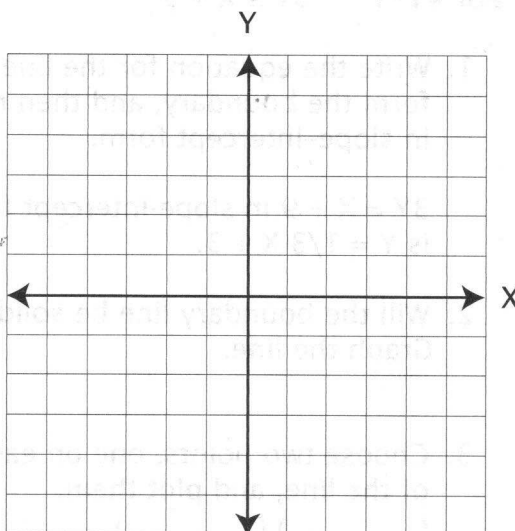
For #9-12  $-3X - Y \leq -1$

9. Rewrite the equation for the boundary line ( $-3X - Y = -1$ ) in slope-intercept form.

10. Will the boundary line be solid or dotted? Graph the line.

11. Choose two points, one on each side of the line, and plot them.  
 ( \_\_, \_\_ ) ( \_\_, \_\_ )

12. Shade in the graph.



Write each inequality in slope-intercept form.

13.  $X + Y > -2$

14.  $-2Y + 4X < 6$

15.  $-4Y - 8X \geq 8$

Answer the questions.

11. What fraction of a gallon is a pint?
12. What percent of a gallon is a quart?
13. Since 1 quart = .95 liters, 1 gallon = \_\_\_\_ liters.
14. Since 1 quart = .95 liters, \_\_\_\_ quarts = 1 liter.
15. What is the slope of a line parallel to  $1/2 Y = X + 16$ ?
16. What is the slope of a line perpendicular to the line in #15?
17. Write the equation for a line with a slope of 3 that passes through the point (-3, -4).
18. Change  $12/17$  to a decimal (round to hundredths) and to a percent.
19. 17% of 425 =
20. The point (5, -5) lies in which quadrant?