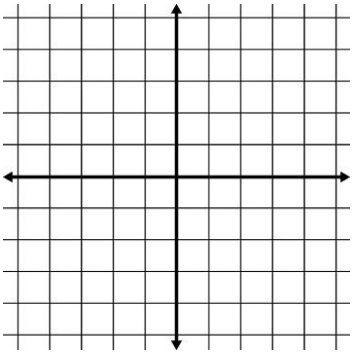
4B Lining Up (Graphing Linear Inequalities) Name _____Per: ____
SHOW YOUR WORK FOR CREDIT. NO WORK IN PEN.

1. Describe how you would graph an inequality that was in $y = mx + b$ form: _____
   _____
2. Describe how you would graph an inequality that was in $ax + by = c$ form: _____
   _____
3. Explain when you use a dotted line or solid line when graphing inequalities on a coordinate plane.
   Dotted Line: _____ Solid Line: _____

Graph the following inequalities. (Hint: solid or dotted?) **Use a Test Point** to determine where to shade.

4. $y \geq -3x + 2$

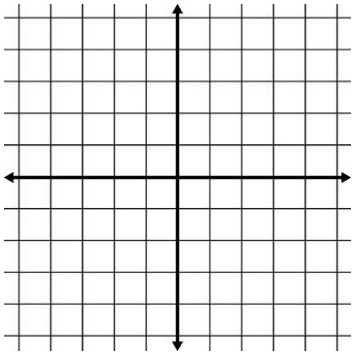


Solid OR Dotted Boundary Line?

TEST POINT (**EX**): (0, 0). $0 \geq 0 + 2$, **NOT TRUE**
Shade on the side of the line that **DOES NOT** include the point (0,0) since it is **NOT** a solution.

Is (4, -3) part of the solution set? _____
Show using your inequality:

5. $y \leq \frac{3}{2}x + 1$



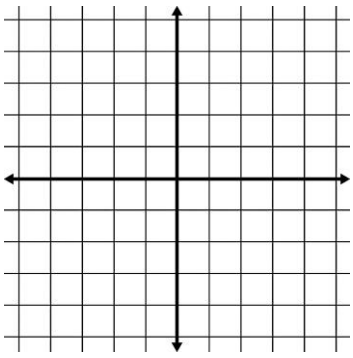
Solid OR Dotted Boundary Line?

TEST POINT: _____. True? _____

Is (4, 4) part of the solution set? _____
Show using your inequality:

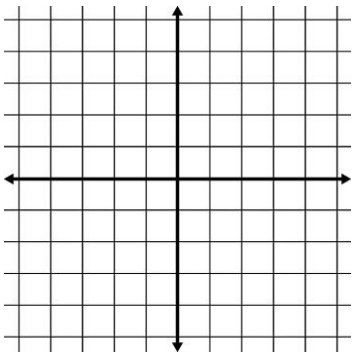
6. $2x + 3y > 12$

x-intercept: (, 0)
y-intercept: (0 ,)
Dotted or Solid Boundary
Test Point: _____

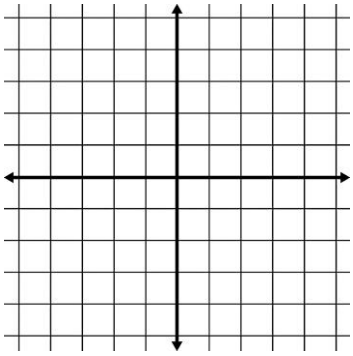


7. $5x + 3y < 15$

x-intercept: _____
y-intercept: _____
Dotted or Solid Boundary
Test Point: _____

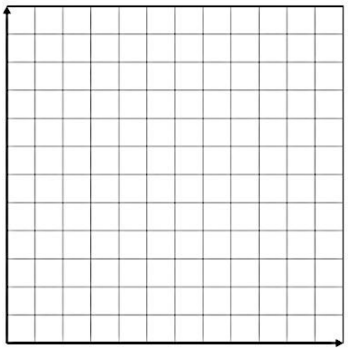


x-intercept: _____
y-intercept: _____
Dotted or Solid Boundary
Test Point: _____



9. What should you do if your test point falls on the boundary line? _____

10. The Yellow Cab Taxi charges $5.00 flat rate in addition to $0.50 per mile. Show your work in the following ways.



a. Table

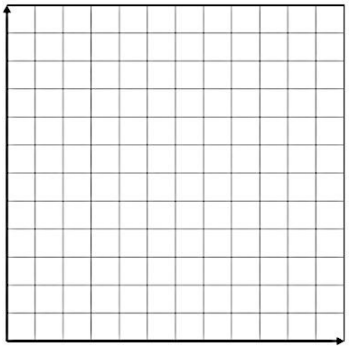
# of miles	*Total cost*
0	
10	
20	

b. Equation _____

c. Graph. Label your graph. (x-axis by 2 miles and y-axis by $2.00)

d. On your graph above, show the possible solutions if the cab driver charges **at least a $5.00** flat fee.

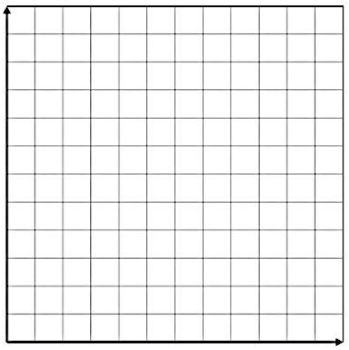
11. Martha works in a shoe store and receives *less than* $25 per day plus $5.00 for each pair of shoes that she sells. Show your work in a table, inequality and graph.



# of shoes	*Total $ earned*
0	
5	
15	

Inequality: _____

12. VHMS is planning their next school play. They will charge $2 per child ticket and $5 per adult tickets.



a. What will be the number of each type of ticket sold to make **exactly $2000**? Show your work the following ways:

b. Table

child	*adult*
0	
	0

c. Equation _____

d. Graph. (Label by 50).

e. Write an inequality if they make **greater than** $2000. _____

f. Explain how your graph would change _____

g. Graph the change on the grid above.

Use the following inequality **14 – 2x < y** for the next few questions.

13. Describe *at least* 3 important details about the graph.

a. _____

b. _____

c. _____

14. Will the point (2, 7) be part of the solution set for this inequality? _____ How do you know? _____

_____

15. How does the zero/zero test help to graph this inequality? _____

_____