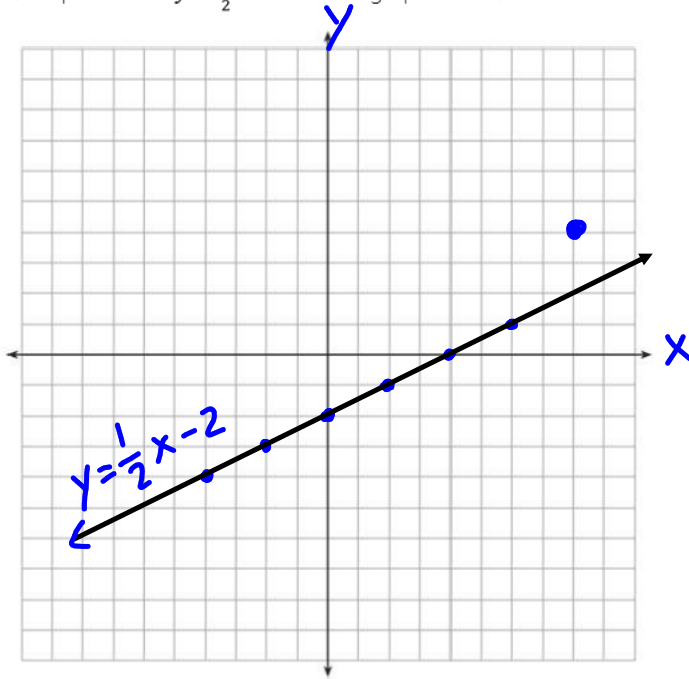


Name: _____

Date: _____

DO NOW:

1. Graph the line $y = \frac{1}{2}x - 2$ on the graph below.



2. Is the point ^{xy}(8,4) located on your graph? Circle a choice.

Yes

No

3. Prove your response from above algebraically in the space below:

$$\begin{aligned}
 y &= \frac{1}{2}x - 2 \\
 4 &= \frac{1}{2}(8) - 2 \\
 4 &= 4 - 2 \\
 4 &\neq 2
 \end{aligned}$$

Review...How to GRAPH a Linear Inequality

1. Identify the **slope** and **y-intercept** of the inequality.
2. Plot the **y-intercept**, then use $\frac{\text{rise}}{\text{run}}$ (slope) to graph more points.
3. Connect your points (using a ruler) keeping in mind that:

$< \text{ or } >$ Dotted / Dashed Line	$\leq \text{ or } \geq$ Usual Solid Line
---	---

4. Shade in the correct direction:

$< \text{ or } \leq$ SHADE DOWN	$> \text{ or } \geq$ SHADE UP
------------------------------------	----------------------------------

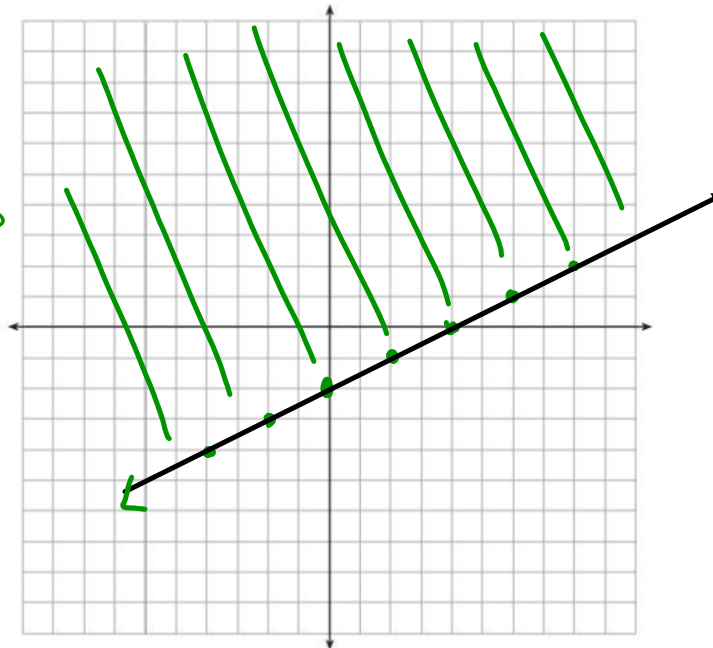
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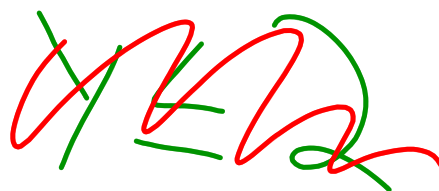
$2 \leq y$

Example:

$y \geq \frac{1}{2}x - 2$

$\rightarrow y >$
y first, rule works





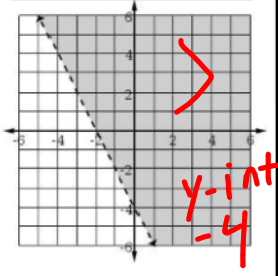
Name: _____ Period: _____ **Graph Linear Inequalities**
 Write the inequality of the graph shown. Find your answer and color it according to your color chart. Not all answers will be used.

$y > x$	$y > -x$	$y < 4x + 2$	$y \geq -x$
$y < 3$	$y \leq 4x + 2$	$y \leq x + 3$	$y > \frac{2}{3}x + 1$
$y < 3x$	$y \geq \frac{1}{4}x + 2$	$y < -2x - 4$	$y > \frac{1}{2}x + 1$
$y < -4$	$y > 4x + 2$	$y \geq \frac{2}{3}x + 1$	$y \geq \frac{1}{2}x + 1$

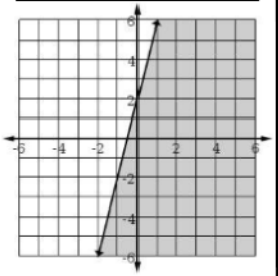
The unused answers are

Answers in this box are

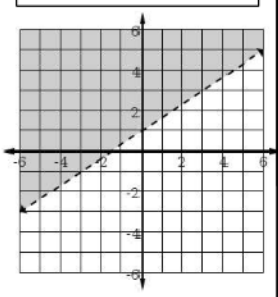
1. $y > -2x - 4$



2.

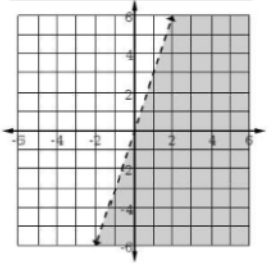


3.

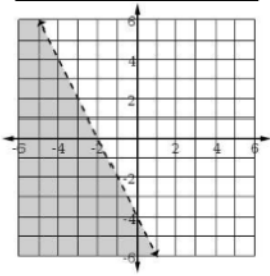


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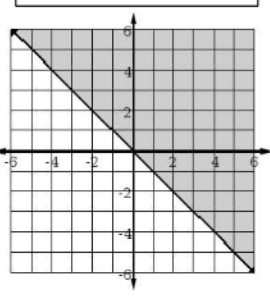
4.



5.

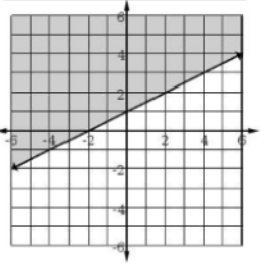


6.

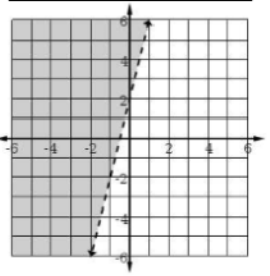


Answers in this box are

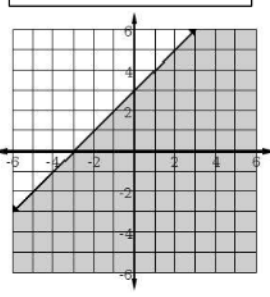
7.



8.

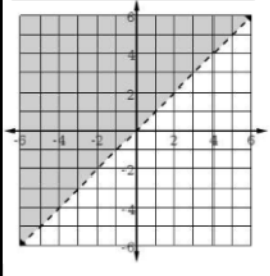


9.

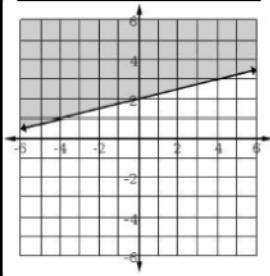


Answers in this box are

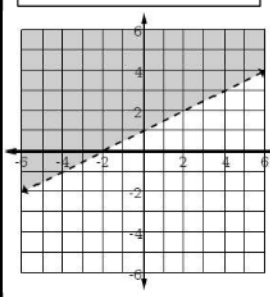
10.



11.



12.



solve for b

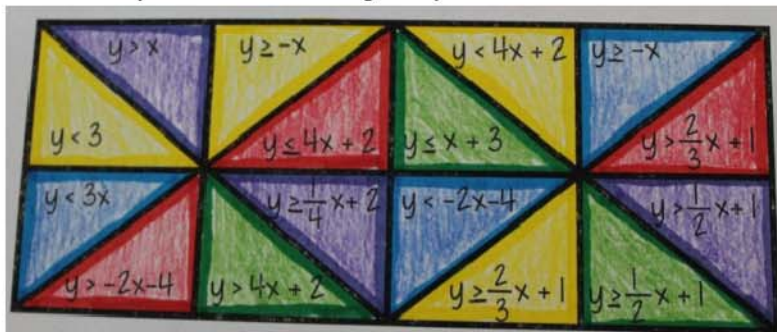
$$\frac{a}{+c} = \frac{bx - c}{+c}$$

$$\frac{a+c}{x} = \frac{bx}{x}$$

$$\frac{a+c}{x} = b$$

Name: _____ Period: _____ **Graph Linear Inequalities**
 Write the inequality of the graph shown. Find your answer in the puzzle and color that piece according to your color chart.

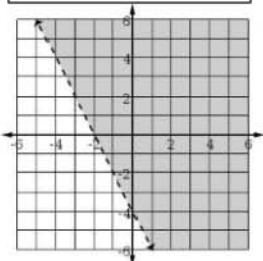
ANSWER KEY



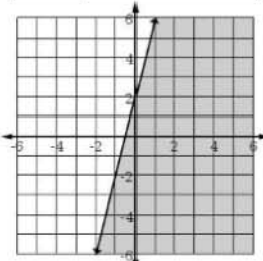
The unused answers are

Answers in this box are

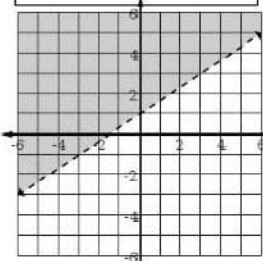
1. $y > -2x - 4$



2. $y \leq 4x + 2$

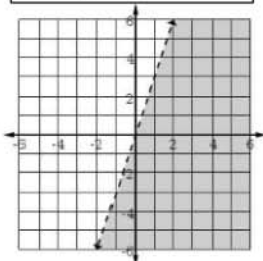


3. $y > \frac{2}{3}x + 1$

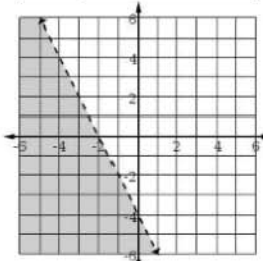


Answers in this box are

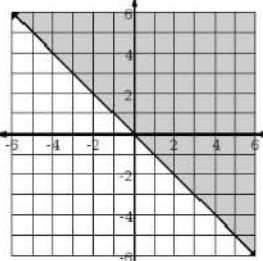
4. $y < 3x$



5. $y < -2x - 4$

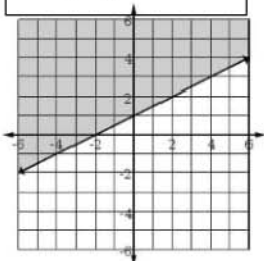


6. $y \geq -x$

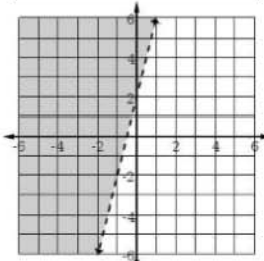


Answers in this box are

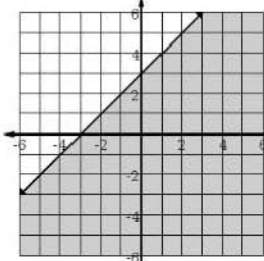
7. $y \geq \frac{1}{2}x + 1$



8. $y > 4x + 2$

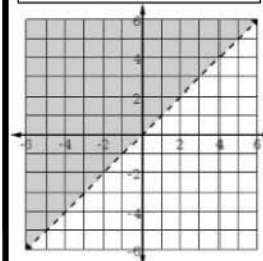


9. $y \leq x + 3$

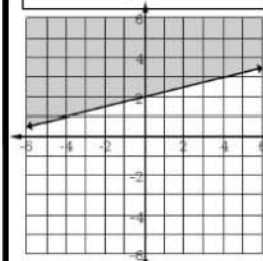


Answers in this box are

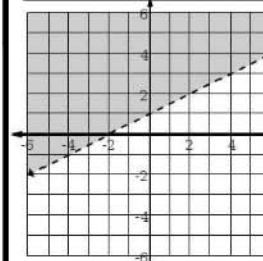
10. $y > x$



11. $y \geq \frac{1}{4}x + 2$



12. $y > \frac{1}{2}x + 1$

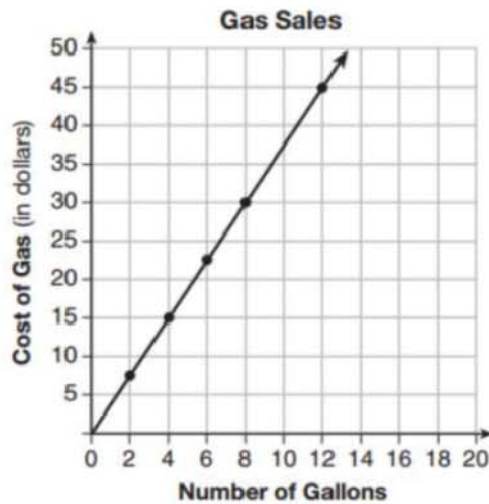


Some Additional Midterm Review

1. The sum of three consecutive integers is 123. Find the three integers.

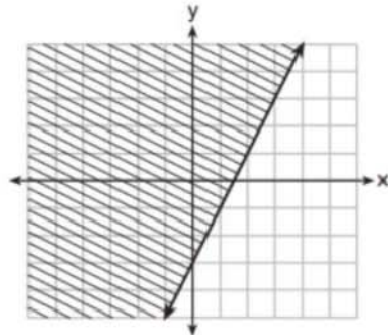
2. There are 461 students and 20 teachers taking buses on a trip to a museum. Each bus can seat a maximum of 52. What is the *least* number of buses needed for the trip?
 - 1) 8
 - 2) 9
 - 3) 10
 - 4) 11

3. The graph below was created by an employee at a gas station.



- Which statement can be justified by using the graph?
- (1) If 10 gallons of gas was purchased, \$35 was paid.
 - (2) For every gallon of gas purchased, \$3.75 was paid.
 - (3) For every 2 gallons of gas purchased, \$5.00 was paid.
 - (4) If zero gallons of gas were purchased, zero miles were driven.

4. Which inequality is represented by the graph below?



- | | |
|---------------------|----------------------|
| (1) $y \leq 2x - 3$ | (3) $y \leq -3x + 2$ |
| (2) $y \geq 2x - 3$ | (4) $y \geq -3x + 2$ |

5. Michael borrows money from his uncle, who is charging him simple interest using the formula $I = Prt$. To figure out what the interest rate, r , is, Michael rearranges the formula to find r . His new formula is r equals

- | | |
|---------------------|--------------------|
| (1) $\frac{I-P}{t}$ | (3) $\frac{I}{Pt}$ |
| (2) $\frac{P-I}{t}$ | (4) $\frac{Pt}{I}$ |

6. Solve the following system:

$$\begin{aligned} 5x + y &= 9 \\ 10x - 7y &= -18 \end{aligned}$$