

1.3C Entrance Ticket
MORE SHADING PRACTICE!!!

Name _____

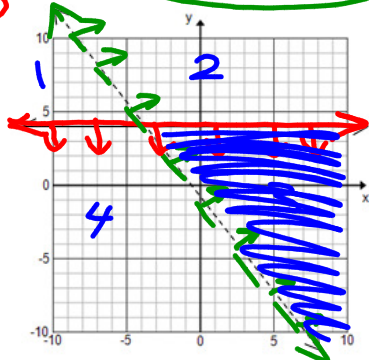
Per _____

Directions: Shade ONLY the feasible region for the system of inequalities on the right.

1. $\frac{-4}{3}x - 1 < y$

$y \leq 4$

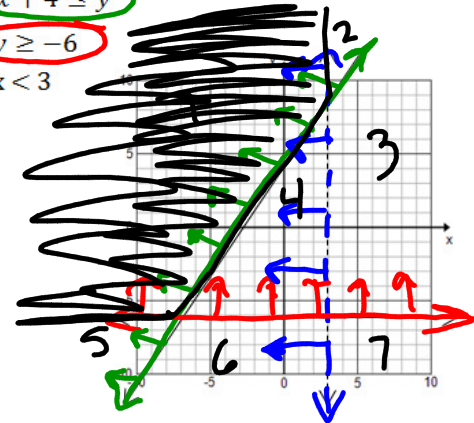
$y > -\frac{4}{3}x - 1$



2. $2x + 4 \leq y$

$y \geq -6$

$x < 3$



1.3A Bingo

- With your partner, do 3 problems in order to get a bingo and complete the assignment
- Blackout is extra credit!
- If you are finished early, either work on homework or show me completed and corrected homework
- TIME LIMIT:

1.3 I can represent real-world situations as a Linear Programming problem and demonstrate an understanding of how to find reasonable solutions.

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*1.3C Linear Programming -
Finding Vertices Graphically*

Section
1.3C

Often, systems of linear inequalities deal with problems for which you are trying to find the best possible (**optimal**) situation given a set of constraints. Most of these applications fall in a category called **linear programming** problems.

1) Cam is planning her spring planting and wants to find the number of acres of corn and wheat to plant to produce the most profit. Cam has the following constraints:

[Redacted constraints]

a) Write an inequality to represent the revenue constraint. Use [redacted] and [redacted]

$$9100C + 8000W > 21000$$

b) Write an inequality to represent the number of hours to plant constraint.

$$4C + 3W > 30$$

c) Write two inequalities to represent that the number of acres of corn and the number of acres of wheat must be non-negative.

$$C \geq 0 \quad \uparrow \quad W \geq 0$$

- d) Label the axes of the graph.
- e) Graph the two inequalities on the same grid and shade their solution areas. How do you determine which variable to put on the x-axis and which to put on the y-axis?
- f) Describe the feasible region (the common solution area) for this system of inequalities. Be sure to reference key values from the graph.

$960c + 800w \geq 9600$

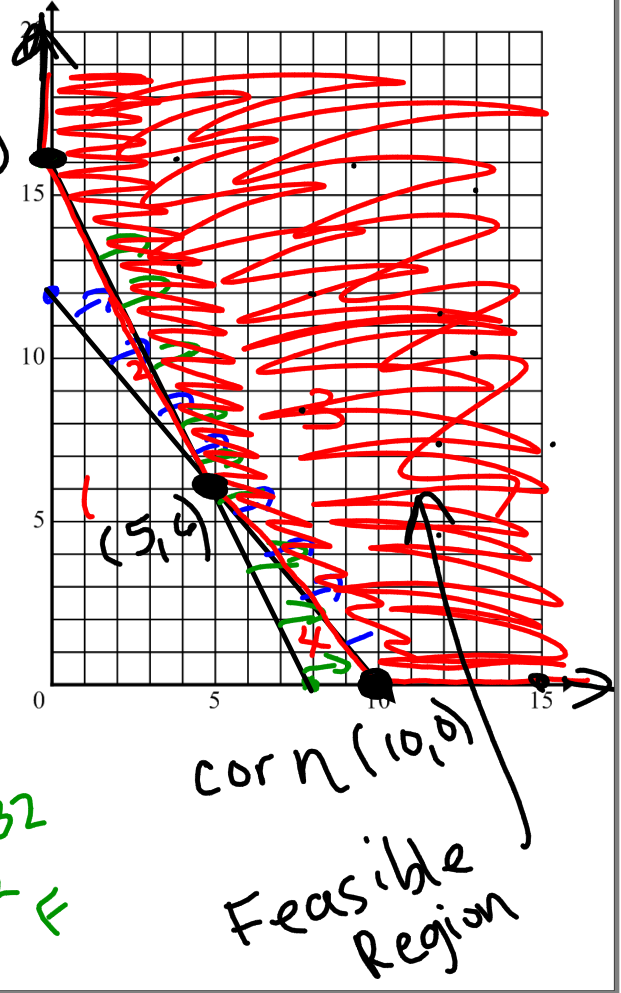
$4c + 2w \geq 32$

wheat

$0 \geq 9600 \quad \text{F}$

$4(0) + 2(0) \geq 32$

$0 \geq 32 \quad \text{F}$



Glue handout in at the top of pg. 65
(over problem #2 & #3)

VOCABULARY VISUAL

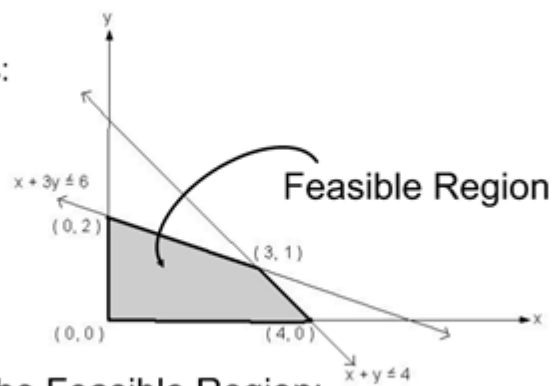
Example -
Constraints:

$$x + 3y \leq 6$$

$$x + y \leq 4$$

$$x \geq 0$$

$$y \geq 0$$



Vertices of the Feasible Region:

$(0, 2)$ $(0, 0)$ $(4, 0)$ $(3, 1)$

Homework

	1.2	I can demonstrate understanding of real-world situations that can be modeled as linear equations or linear inequalities.	1.2 3,4,5,7,8,10,13 (Pages 98-100)	/9	___ %
	1.3	I can represent real-world situations as a linear programming problem and demonstrate an understanding of how to find reasonable solutions.	1.3A 1,3,5,6,7 (Pages 101-103)	/17	___ %
			1.3B (Pages 111 and 113)	/6	___ %
			QUIZ	___	___ %

tomorrow!