Solve using your calculator. Round all decimals to the nearest hundredth.

Weeks of Growth	Height of Bamboo in feet	Height of Corn in feet
1	1.5	3
2	2	3.5
3	2.5	4
4	4	4.5
5	6	4.5
6	6.5	5
7	6.5	5.5
8	9	6

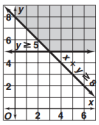
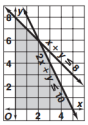
Bamboo Equation

Corn Equation

In what week will the height of the bamboo be the same as the height of the corn? How tall will they be?

Sep 14-6:10 PM

Answers for Lesson 3-4 Exercises

1. When $x = 4$ and $y = 2$, P is maximized at 16.
2. When $x = 600$ and $y = 0$, P is maximized at 4200.
3. When $x = 6$ and $y = 8$, C is minimized at 36.
4. vertices: (0, 0), (5, 0), (5, 4), (0, 4); maximized at (5, 4)
5.  vertices: (3, 5), (0, 8); minimized at (0, 8)
6.  vertices: (0, 0), (5, 0), (2, 6), (0, 8); maximized at (5, 0)

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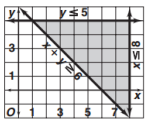
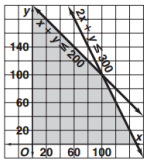
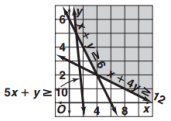
7.  vertices: (1, 5), (8, 5), (8, −2); minimized at (8, −2)
17.  vertices: (0, 0), (150, 0), (100, 100), (0, 200); maximized when $P = 400$ at (0, 200)
18.  vertices: (12, 0), (0, 10), (4, 2), (1, 5); minimized when $C = 80{,}000$ at (4, 2)

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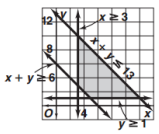
19. 

vertices: (3, 3), (3, 10), (5, 1), (12, 1); maximized when $P = 51$ at (12, 1)

$P = 4x + 3y$

$P = 4(3) + 3(3)$

$P = 4(3) + 3(10)$

$6 \le x + y \le 13$

$6 \le x + y$

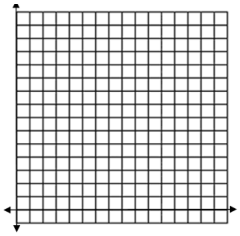
$x + y \le 13$

Sep 15-11:15 AM

3.4 Note Taking Guide for Linear Programming

	corn	bran	Total / Limits	inequality / constraints
# of (what is being produced?)	x	y		
limitation #1 milk	4	2	16	$4x+2y \le 16$
limitation #2 flour	3	3	15	$3x+3y \le 15$
objective function	$3	$2		$P = 3x + 2y$

Baking a tray of corn muffins takes 4 cups milk and 3 cups wheat flour. A tray of bran muffins takes 2 cups milk and 3 cups wheat flour. A baker has 16 cups of milk and 15 cups of flour. He makes $3 profit per tray of corn muffins and $2 profit per tray of bran muffins. How many trays of each type of muffin should the baker make to maximize profit?



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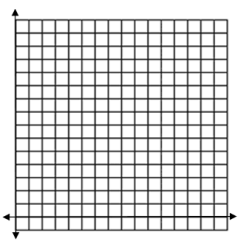
3.4 Note Taking Guide for Linear Programming

			Total / Limits	inequality / constraints
# of (what is being produced?)				
limitation #1				
limitation #2				
objective function				

Baking a tray of corn muffins takes 4 cups milk and 3 cups wheat flour. A tray of bran muffins takes 2 cups milk and 3 cups wheat flour. A baker has 16 cups of milk and 15 cups of flour. He makes $3 profit per tray of corn muffins and $2 profit per tray of bran muffins. How many trays of each type of muffin should the baker make to maximize profit?



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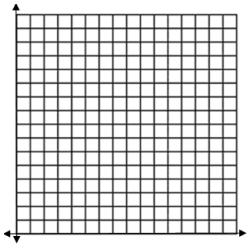
Now try this problem:

A manufacturer is producing skateboards. Each standard skateboard costs $9 for parts and $15 for labor and each long board costs $6 for parts and $20 for labor. The manufacturer's budget is $810 for parts and $1800 for labor. If the income per unit is $150 for a standard skateboard and$175 for a long board, how many of each type of skateboard should be manufactured to maximize income?

			Total / Limits	inequality / constraints
# of (what is being produced?)				
limitation #1				
limitation #2				
objective function				



Oct 3-9:03 PM

HW -
Worksheet
Linear Programming
Word Problems
#1-4

Oct 3-9:04 PM