

Nov 30-2:57 PM

1. Blueberries cost \$2 per bag and raspberries cost \$3 per bag. You have \$24 to spend on fruit to be used for a fruit salad, and you do not want to purchase more than ten bags in total. You also need at least one bag of each fruit. Write an inequality for the number of blueberries and one point that does not satisfy the constraints, and interpret the meaning in the context of the situation being modeled.

*You cannot write any equations without this step!

*You cannot graph anything without this step!

Variables
 x : # of bags of blueberries
 y : " raspberries

Constraints
 Total bags $x + y \leq 10 \rightarrow y \leq -x + 10$
 Total cost raspberries $2x + 3y \leq 24 \rightarrow y \leq \frac{2}{3}x + 8$
 $0 \leq 10$? yes
 $0 \leq 8$? yes

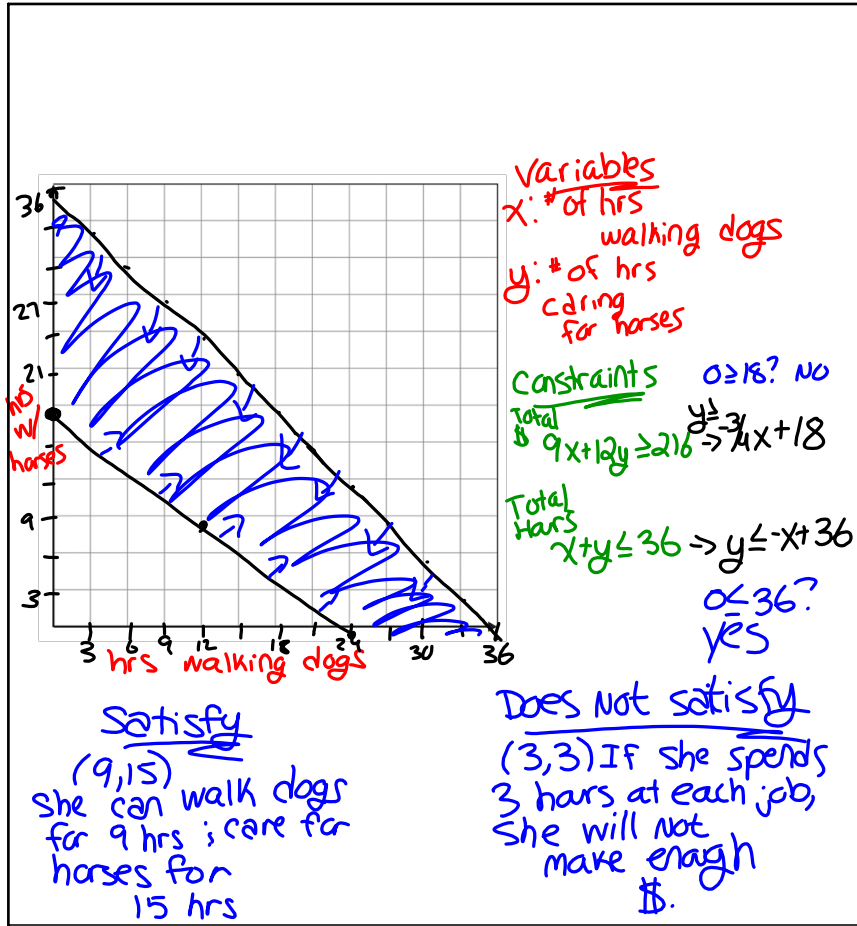
$y \geq \frac{3}{2}x$

$(2, 1)$
 $1 \geq \frac{3}{2}(2)$? $1 \geq 3$? NO

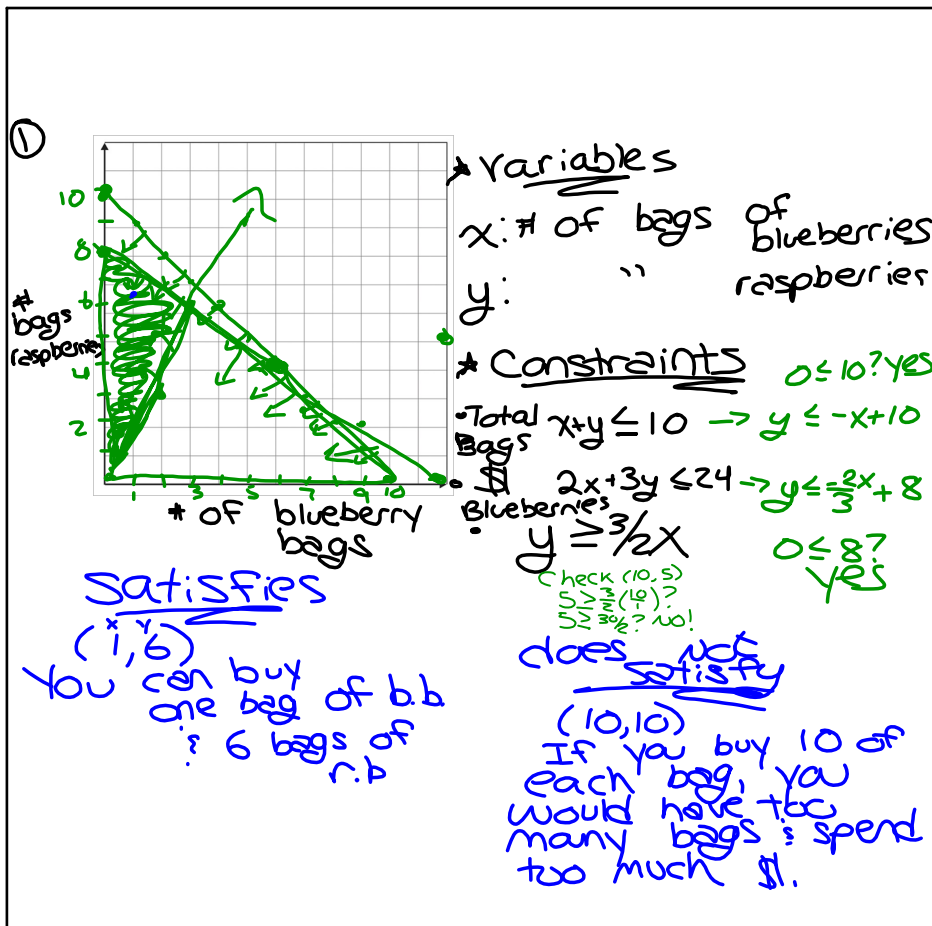
Satisfies
 $(0, 3)$
 You can buy just 3 bags of raspberries.

Does not satisfy
 $(10, 10)$
 If you buy 10 of each bag, then you have too many bags, spend too much \$, etc.

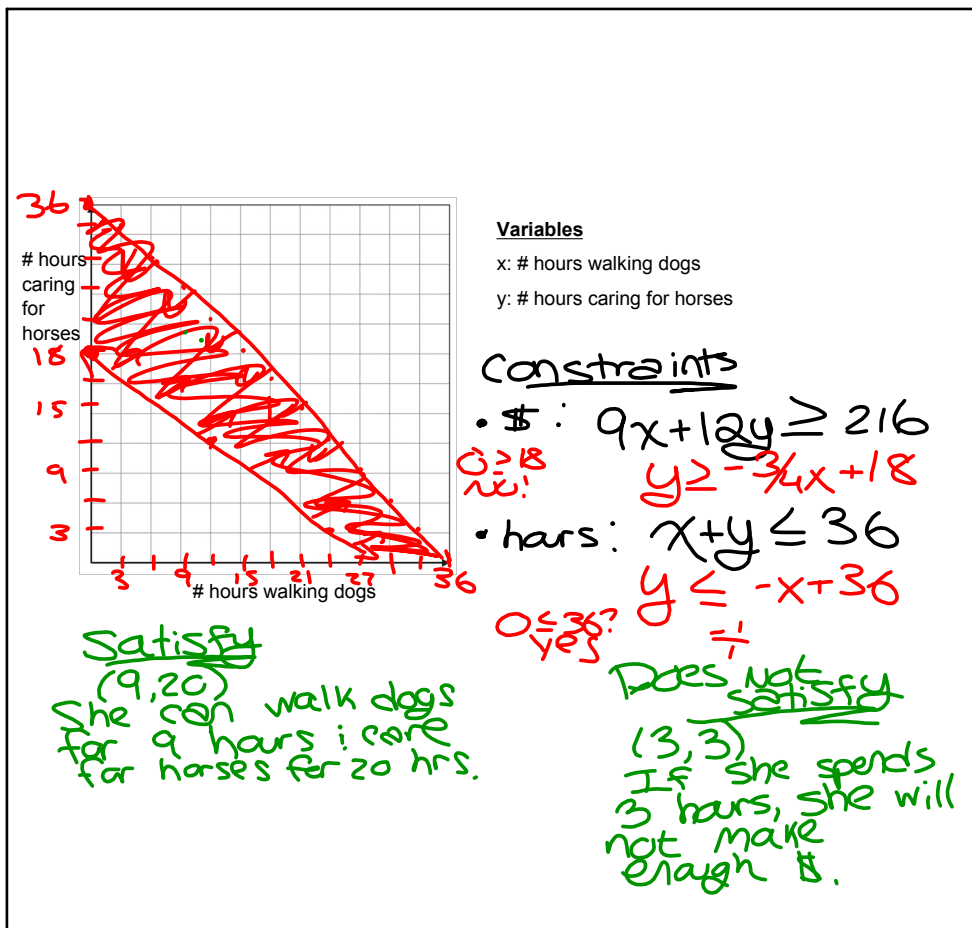
Dec 7-8:17 AM



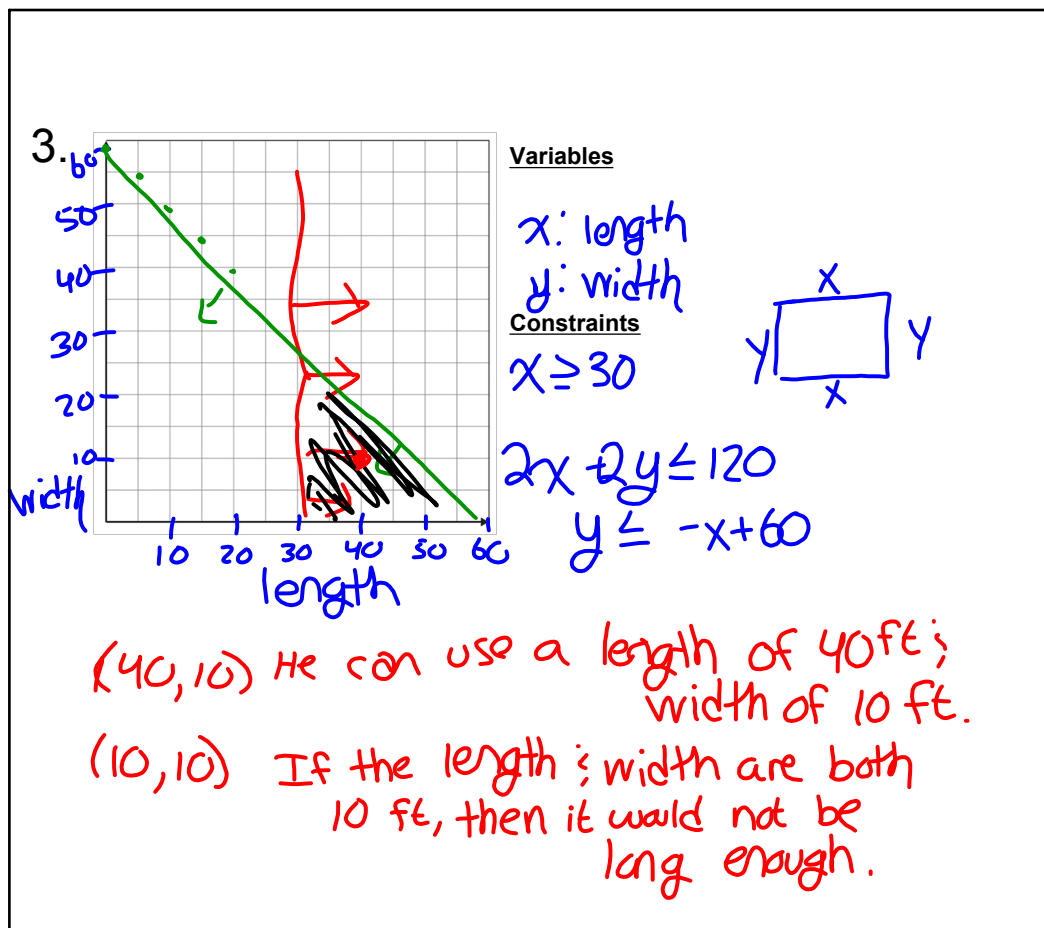
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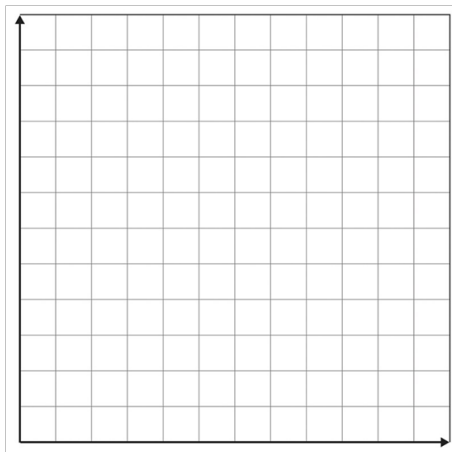


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3.

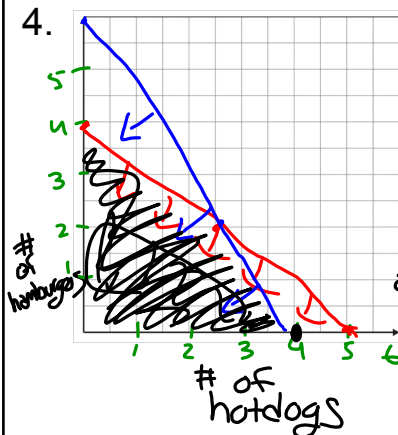


Variables

Constraints

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4.



Variables

x: # of hotdogs eaten
y: " hamburgers "

Constraints

calories
 $210x + 300y \leq 1200$

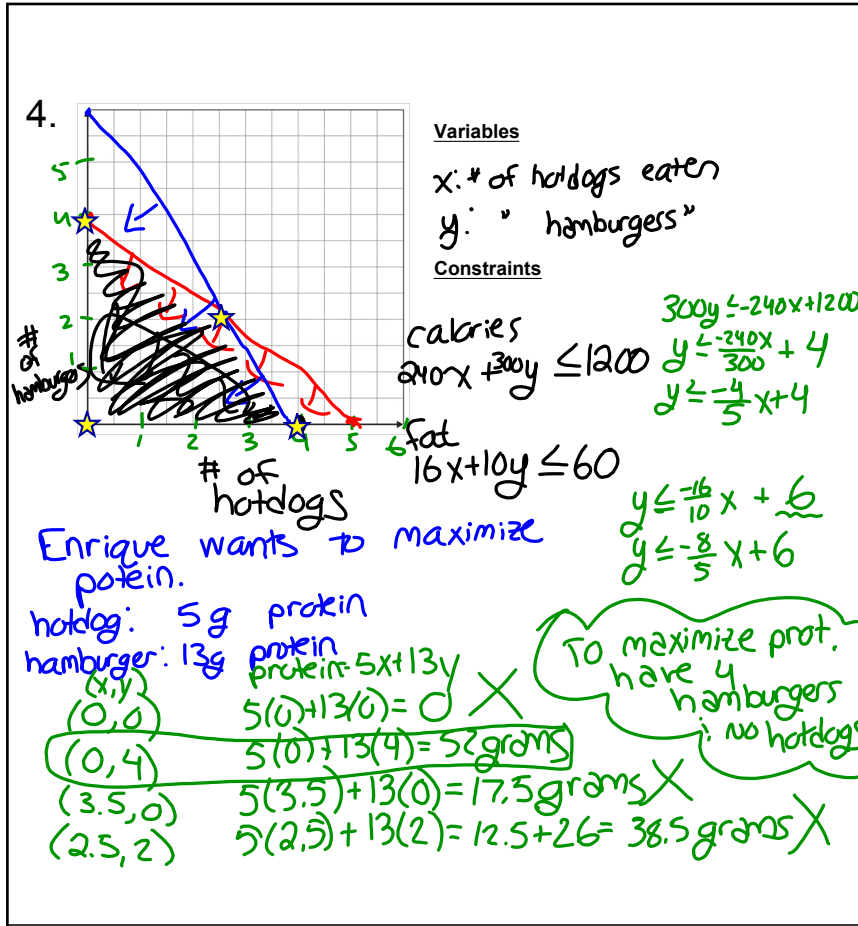
$300y \leq 240x + 1200$
 $y \leq \frac{240x}{300} + 4$
 $y \leq \frac{4}{5}x + 4$

fat
 $16x + 10y \leq 60$

$y \leq \frac{16}{10}x + \frac{60}{10}$
 $y \leq \frac{8}{5}x + 6$

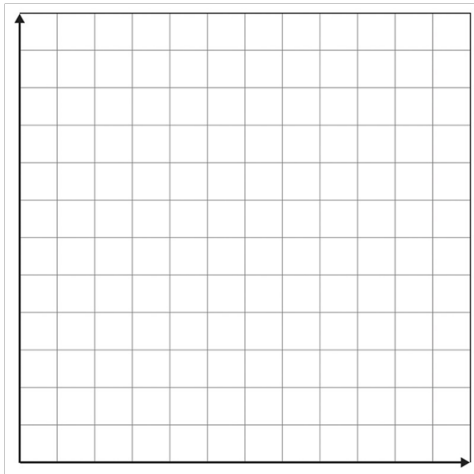
- (0,0) He can eat no hotdogs or hamburgers
- (5,6) He cannot have 5 burgers and 6 dogs b/c that too many calories AND too much fat!
- (4,0) He can't have 4 hotdogs b/c too much fat.

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4.



Variables

Constraints

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