HOMEWORK Questions...

p. 252: #1 - 3

p. 259: #1 - 4

4. Ed found spiders and crickets in his storage room.
   • There were 20 or fewer spiders and 20 or more crickets.
   • There were 45 or fewer crickets and spiders, in total. Spiders have
     8 legs, and crickets have 6 legs.
   a) What combination of spiders and crickets would have the
        greatest number of legs?
   b) What combination would have the least number of legs?

20 spiders / 25 crickets

20 crickets

$x \to$ # of spiders $x \in w$

$y \to$ # of crickets $y \in w$

$x \leq 20$ $y \geq 20$ $x + y \leq 45$

$L = 8x + 6y$

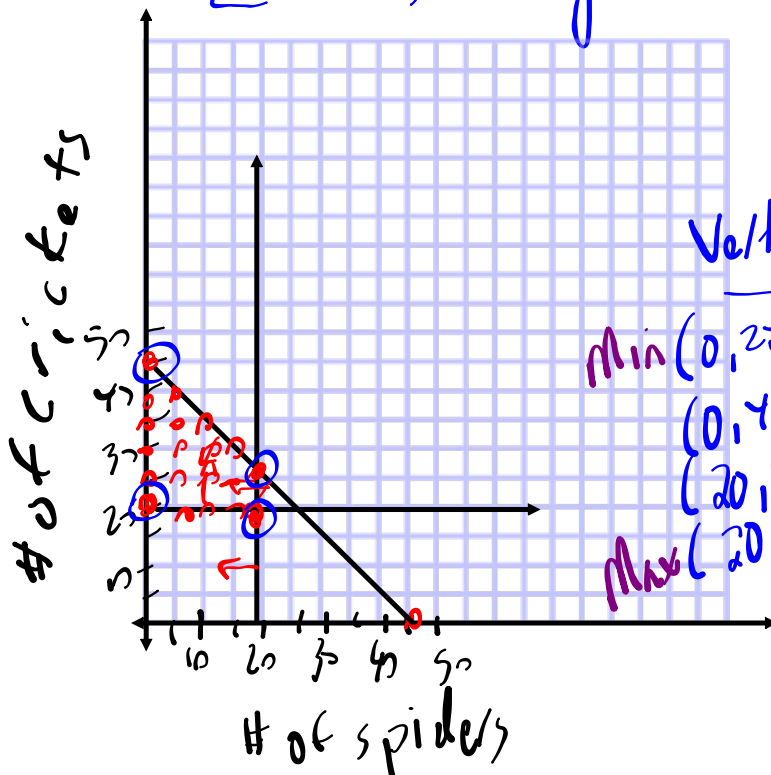$x + y = 45$
x int $(45, 0)$
y int $(0, 45)$

Vertex	$L = 8x + 6y$
Min $(0, 20)$	$8(0) + 6(20) = 120$
$(0, 45)$	
$(20, 20)$	
Max $(20, 25)$	$8(20) + 6(25) = 310$

# of crickets

# of spiders

ONE MORE...

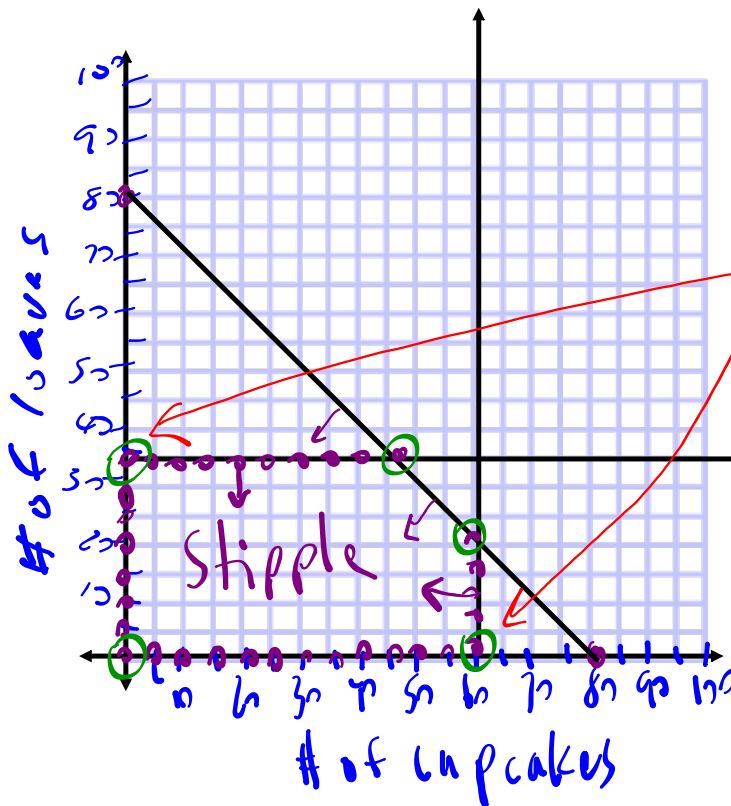Malia and Lainey are baking cupcakes and banana mini-loaves to sell at a school fundraiser...

- No more than 60 cupcakes and 35 mini-loaves can be made each day.
- Malia and Lainey can make no more than 80 baked goods, in total, each day.
- It costs $0.50 to make a cupcake and $0.75 to make a mini-loaf.

Determine the minimum cost to produce the baked goods.

Sub vertices into this

$x \to$ # of cupcakes $x \in W$ $C = 0.50x + 0.75y$
$y \to$ # of loaves $y \in W$

$x \leq 60$ $y \leq 35$ $x + y \leq 80$ ← GRAPH

$x + y = 80$
x-int $(80, 0)$
y-int $(0, 80)$

Min Cost?

$C = 0.50x + 0.75y$

$(0, 35) \to 0.75(35)$
Min $= \$26.25$

$(60, 0) \to 0.50(60)$
$= \$30$

Stipple

# of loaves

# of cupcakes

HOMEWORK...

p. 261: #5, 7, 8, 11, 13