WARM UP - use graph paper

e.g., *Problem*: A library is buying both hardcover and paperback books. It plans to purchase at most four times as many paperbacks as hardcover books. Altogether the plan is to purchase no fewer than 200 books. Hardcover books average $35.75 in cost while paperbacks average $12.20. How can the library minimize its costs?

Solution: Let x represent the number of hardcover books. Let y represent the number of paperback books. Let C represent the total cost of the books.

Objective function to minimize: $C = 35.75x + 12.2y$

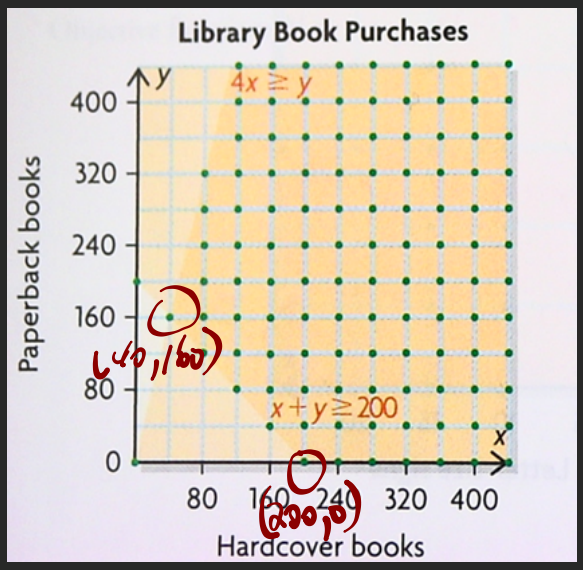
Constraints and restrictions:

$\{(x, y) \mid x + y \geq 200, x \in W, y \in W\}$

$\{(x, y) \mid 4x \geq y, x \in W, y \in W\}$

$y \leq 4x$

x	y
10	40
20	80



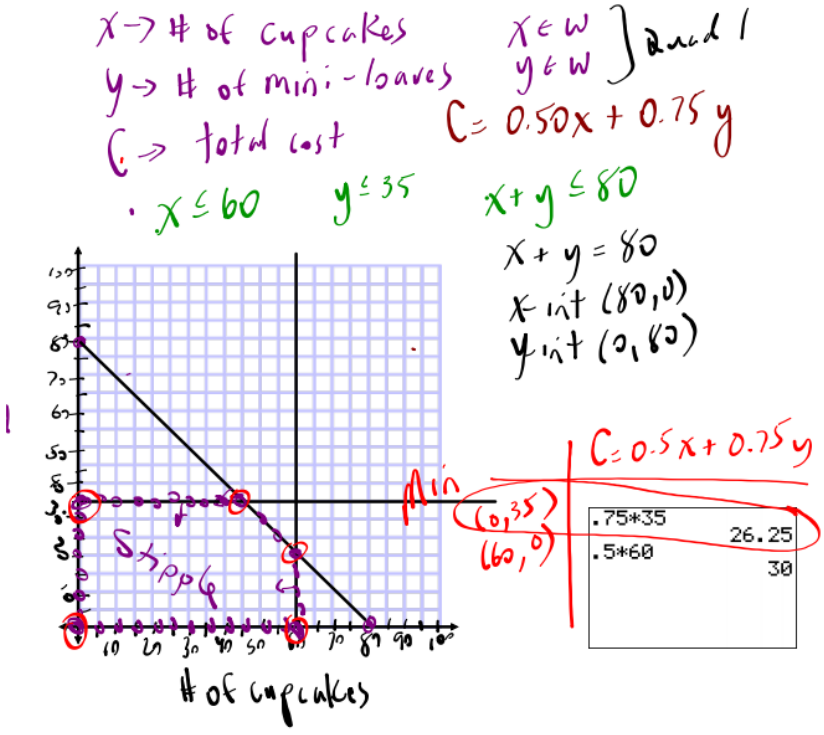
The library should purchase 40 hardcover books and 160 paperback books, for a total cost of $3382.00.

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 mke 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.



HOMEWORK: Test is on TOMORROW!!!

*** CHECK AND CORRECT your quiz...on the website!!!

Review/Practice Questions...

- p. 239: Mid-Chapter Review (Frequently Asked Questions)
- p. 241: Mid-Chapter Practice Questions
- p. 266: Chapter Review (Frequently Asked Questions)
- p. 267: Chapter Practice Questions
- p. 265: Chapter Self-Test (Do this AFTER you practice)