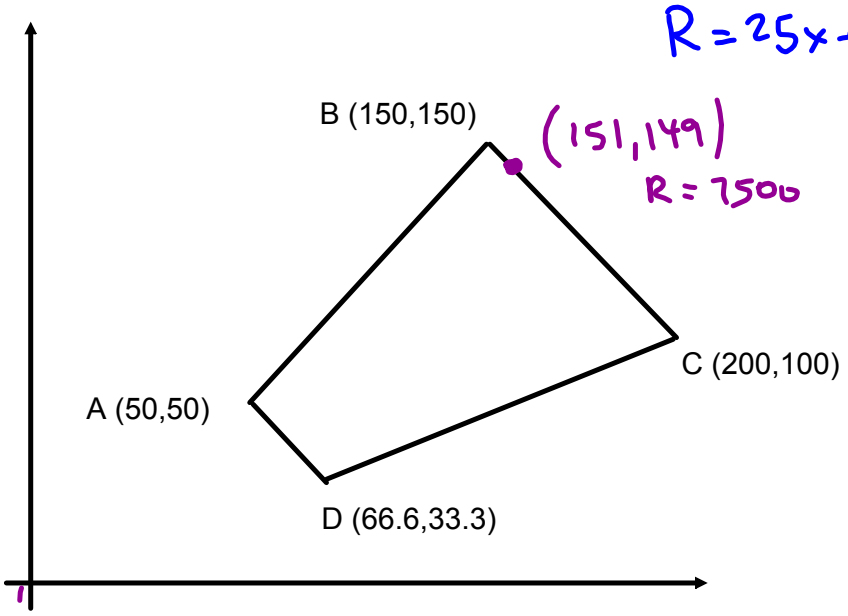
What if Jane sells hats for $25 and shirts for $25?

$R = 25x + 25y$



How many shirts and hats does Jane want to sell?

Pt. B: $R = 25(150) + 25(150) = 7500$

Pt. C: $R = 25(200) + 25(100) = 7500$

Both pt. B and pt. C give a max revenue.

This also means every pt. on line segment $\overline{BC}$ will produce a max. revenue.

If two vertices maximize (or minimize) the objective rule, then every point on the line segment connecting them also maximizes (or minimizes) the rule.

OPTIMIZATION PROBLEMS

1. Identify variables
2. Write system of inequalities
3. Draw polygon of constraints
4. Find vertices
5. Write objective function
6. Find optimal solution(s)

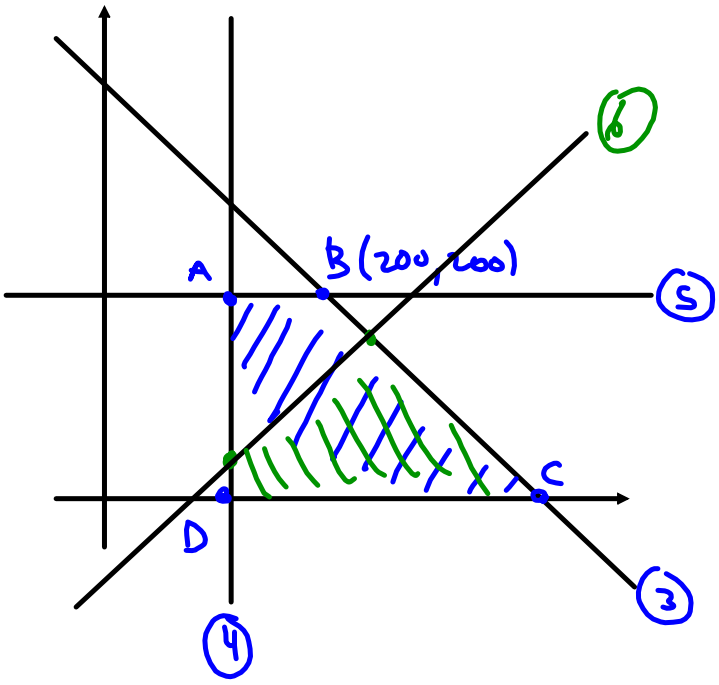
p. 28 #5

p. 29 #6

p.28 #4

x: # of Nat phones
y: # of Val phones

$x \geq 0$ ①
$y \geq 0$ ②
$x + y \leq 400$ ③
$x \geq 150$ ④
$y \leq 200$ ⑤



$R = 40x + 60y$

Pt. B $R = 20\,000$

$x \geq y + 100$ ⑥