

EOC Review #1

Solving linear & absolute value inequalities

* most important thing is to switch the inequality sign whenever you multiply or divide by a negative! *

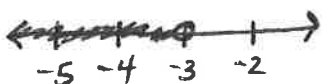
$$\bullet \begin{array}{l} 4-x > 7 \\ -4 \quad -4 \end{array}$$

$$\frac{-x}{-1} > \frac{3}{-1}$$

$$x < -3$$

$$\bullet -10 > 2x+4 > -18$$

$$\bullet 8x+1 \geq 9 \text{ or } -3x \geq 6$$



* absolute value inequalities have 2 solutions! remember that you have to split the absolute value into 2 inequalities (only after the absolute value is alone)

$$\bullet |2x+7| > 9$$

$$\bullet |4-3x| \leq 10$$

$$\bullet 2|x|+1 \geq 7$$

$$2x+7 > 9$$

$$2x+7 < -9$$

$$\frac{2x}{2} > \frac{2}{2}$$

$$\frac{2x}{2} < \frac{-16}{2}$$

$$x > 1$$

$$x < -8$$

absolute value word problems

$$|x - \underbrace{m}_{\substack{\text{middle} \\ \#}}| < \underbrace{d}_{\substack{\text{difference} \\ \text{allowed}}}$$

target length of metal pole is 45 ft with a ± 2 ft difference allowed

$$|x - 45| < 2$$

EOC Review #2

systems & linear programming

*you can solve a system 3 ways $\begin{cases} \text{graphing} \\ \text{substitution} \\ \text{elimination} \end{cases}$

-easiest are graphing & elimination

[*has to be] $y =$ put in calculator & graph
2nd TRACE
5: intersect

has to be in order

$$2x + 4y = 5$$

$$2x + 3y = 7$$

$$y = 3x + 4$$

$$y = -x - 1$$

$$-x + 2y - 5z = 17$$

$$4x - 3y + z = -10$$

$$2x + y + 3z = 0$$

-you can also solve systems with matrices (systems of 3)

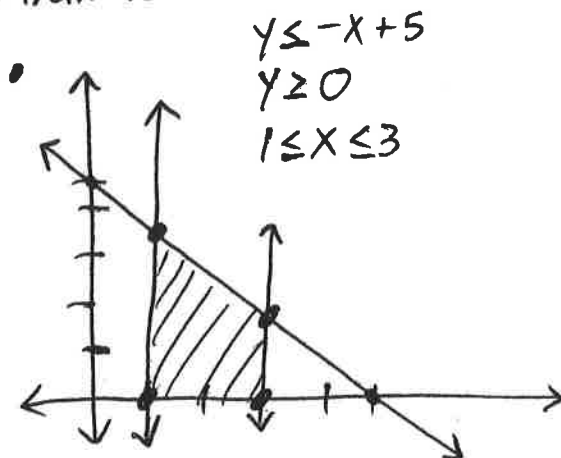
linear programming \rightarrow maximize/minimize

*graph all parts of system

-find all corners (coordinates)

-put coordinates into profit equation to find max or min

*you may have to make equations from the problems.



$$y \leq -x + 5$$

$$y \geq 0$$

$$1 \leq x \leq 3$$

$$(1,0)$$

$$(1,4)$$

$$(3,0)$$

$$(3,2)$$

$$P(x,y) = 2x + 7y$$

$$\text{min.} \rightarrow P(1,0) = 2$$

$$P(3,0) = 6$$

$$P(1,4) = 30$$

$$P(3,2) = 20$$

maximum \leftarrow