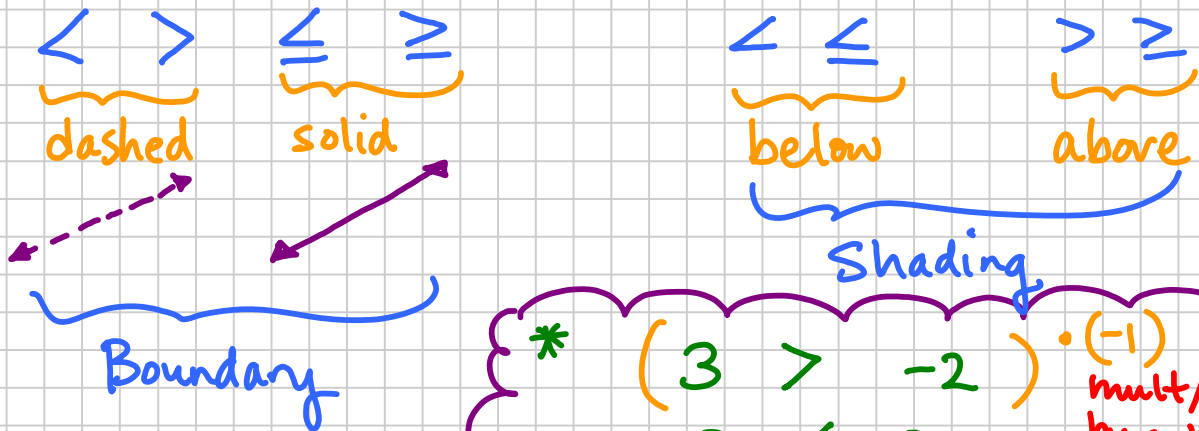


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WED

7.5 (part 1) Systems of Inequalities



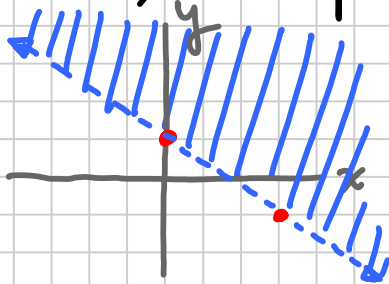
* $(3 > -2) \cdot (-1)$ mult/div by a negative
 $-3 < 2$ switches direction

* $3 < 4$ swap quantities
 $4 > 3$ switches direction

ex 1) Graph

$$y > -\frac{2}{3}x + 1$$

$$y = mx + b$$



- dashed
- above

ex 2) Graph

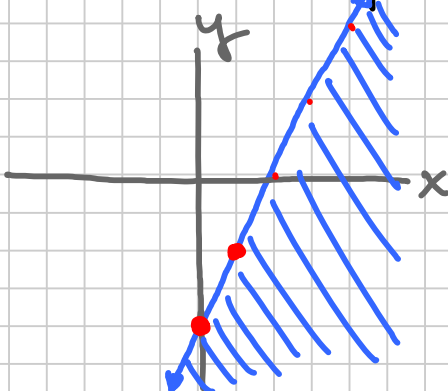
$$2x - y \geq 4$$

$$\begin{aligned} -2x & \quad -2x \\ \frac{-y}{-1} & \geq \frac{-2x}{-1} + \frac{4}{-1} \end{aligned}$$

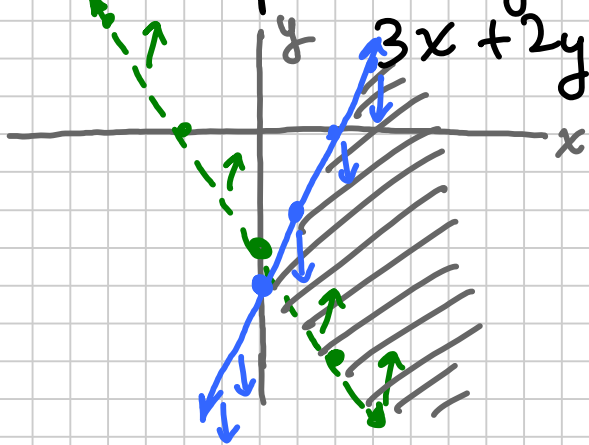
÷ negative

$$y \leq 2x - 4$$

- solid
- below



ex 3) Graph $2x - y \geq 4 \rightarrow y \leq 2x - 4$ (see ex 2)



$3x + 2y > -6 \rightarrow 2y > -3x - 6$

$y > -\frac{3}{2}x - 3$

- dashed
- above

- solid
- below