HW: pp 419 2-32 even

Inequalities in Two Variables

Graph on a coordinate plane.

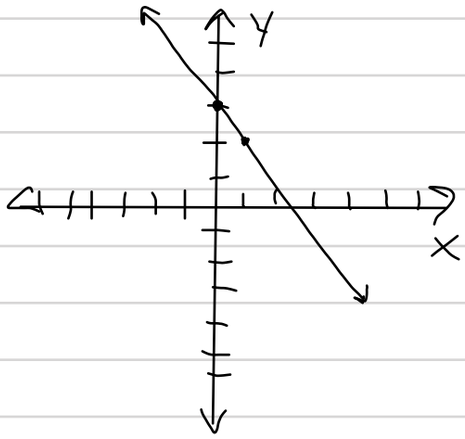
Example 1

Get into $y = mx + b$ form (Slope intercept form).

$x + y = 3$

$-x \quad -x$

$y = -\frac{1}{1}x + 3$



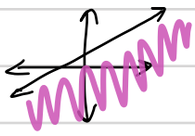
Start with the "b" term, then follow slope from there: $\frac{\text{RISE}}{\text{RUN}}$

Rules for graphing inequalities.

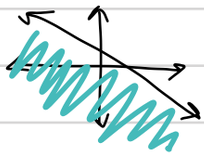
"<" or ">" ⟶ use a dashed line: ←- - - -→

"≤" or "≥" ⟶ use a solid line: ⟷

$y < mx + b$
$y \leq mx + b$ } Shade below the line



$y > mx + b$
$y \geq mx + b$ } Shade above the line



Example 2

Graph on a coordinate plane

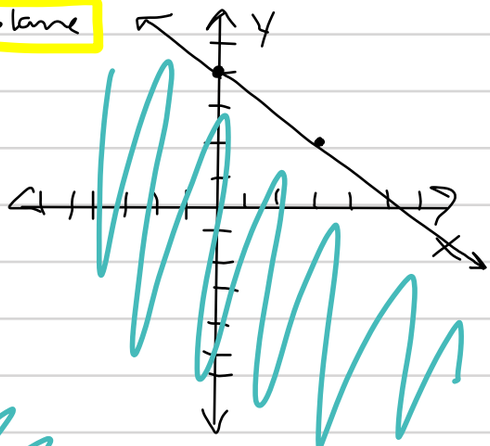
Get into $y = mx + b$ form, then follow the rules for shading

$2x + 3y \leq 12$

$-2x \quad -2x$

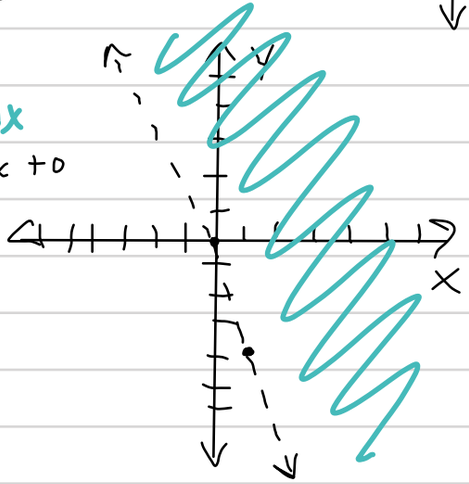
$\frac{3y}{3} \leq \frac{-2x}{3} + \frac{12}{3}$

$y \leq -\frac{2x}{3} + 4$



3

$y + 4x > 0$

$-4x \quad -4x$

$y > \frac{-4x}{1} + 0$