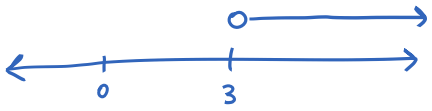
Unit 5 Pt II: Day 23

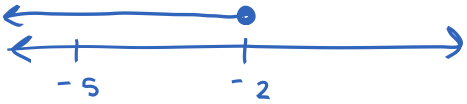
GRAPHING LINEAR INEQUALITIES

Think Back!

1. Graph the following on a number line: $x > 3$. Would x = 0 be a solution to the inequality above? NO!



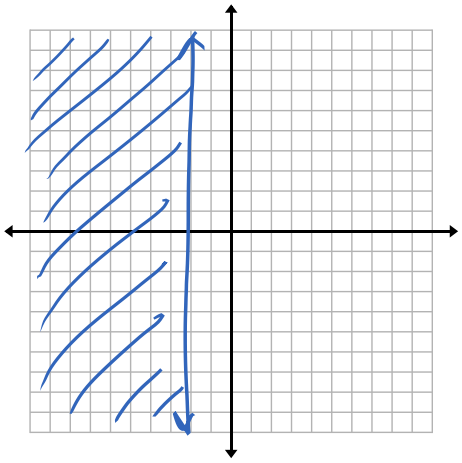
2. Graph the following on a number line: $x \leq -2$. Would x = -5 be a solution to the inequality above? YES!



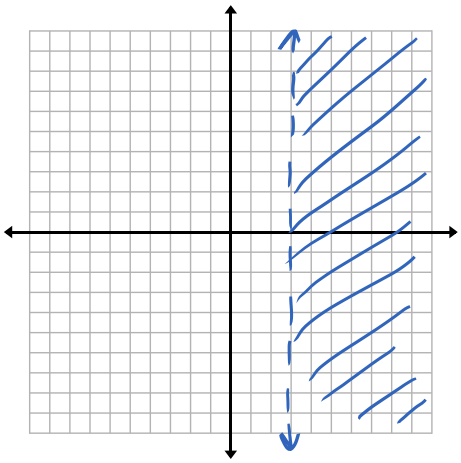
NEW STUFF! Graphing LINEAR inequalities.

Dotted vs. Solid: Draw a solid line for: ≤ or ≥ (closed circles) & draw a dotted line for: < or > (open circles).

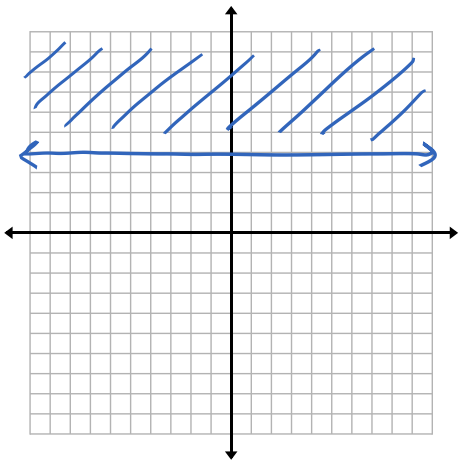
3. Graph $x \leq -2$



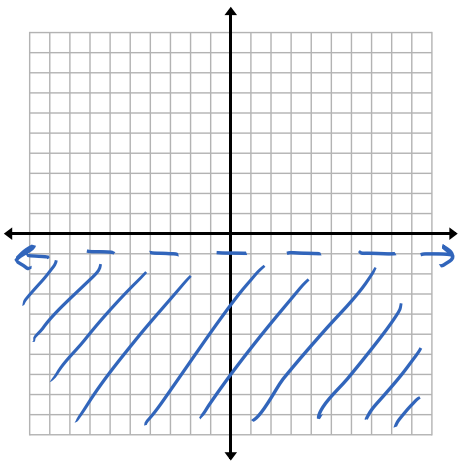
4. Graph $x > 3$



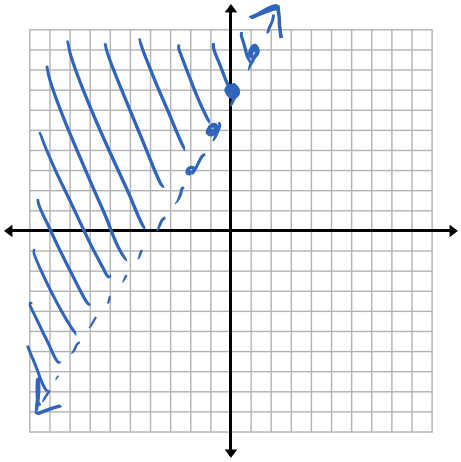
5. Graph $y \geq 4$



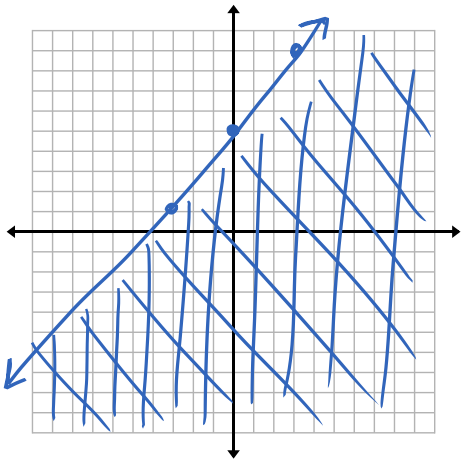
6. Graph $y < -1$



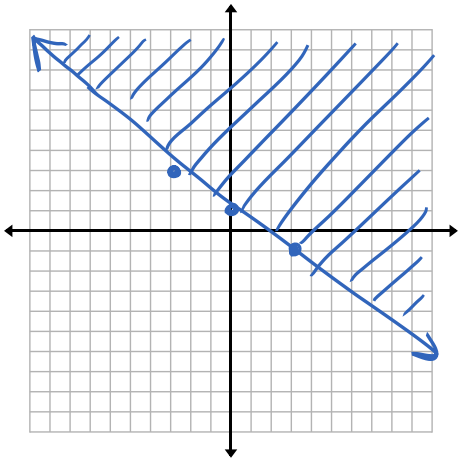
7. Graph $y > 2x + 7$ $m = 2$ $b = 7$



8. Graph $y \leq \frac{4}{3}x + 5$



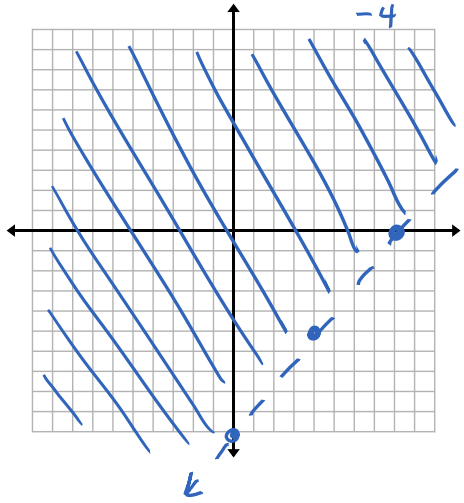
9. $y \geq -\frac{2}{3}x + 1$



10. $5x - 4y < 40$

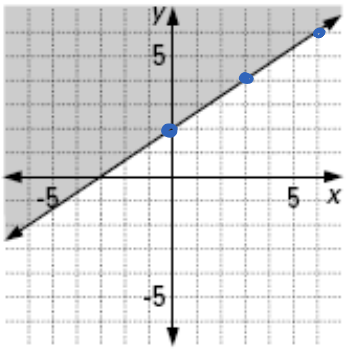
$-5x \quad -5x \Rightarrow \frac{-4y}{-4} < \frac{-5x}{-4} + \frac{40}{-4}$

$y > \frac{5}{4}x - 10$



11. Write an equation to represent the inequalities below.

a.

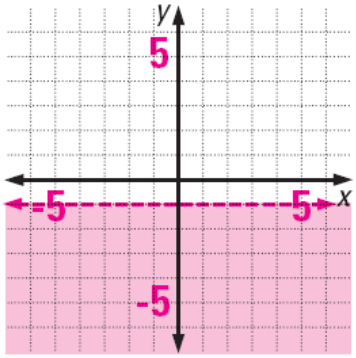


$m = \frac{2}{3}$

$b = 2$

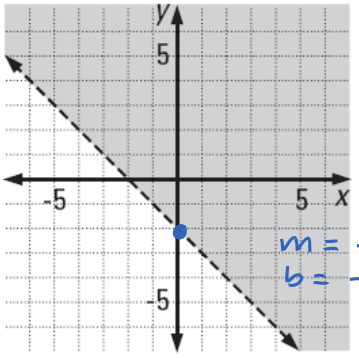
$y \geq \frac{2}{3}x + 2$

b.



$y < -1$

c.



$m = -1$

$b = -2$

$y > -x - 2$