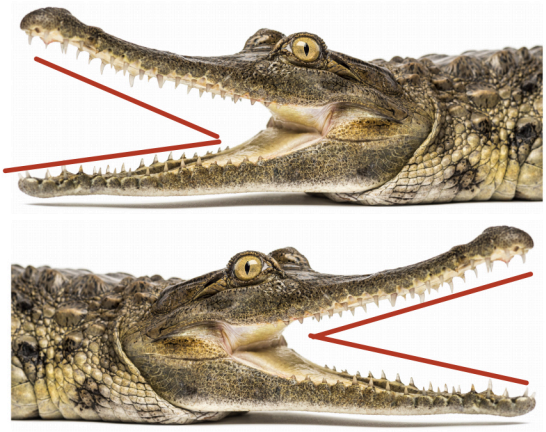
Systems of Equations: Lesson 8

Systems of Inequalities: Notes

Name: Answer Key!

Inequalities:



greater than: $>$ $\geq$ (dotted lines / solid lines)

less than: $<$ $\leq$

Solve:

slope, y-int

$$\begin{cases} y < 2x + 4 \\ -3x - 2y \geq 6 \end{cases}$$

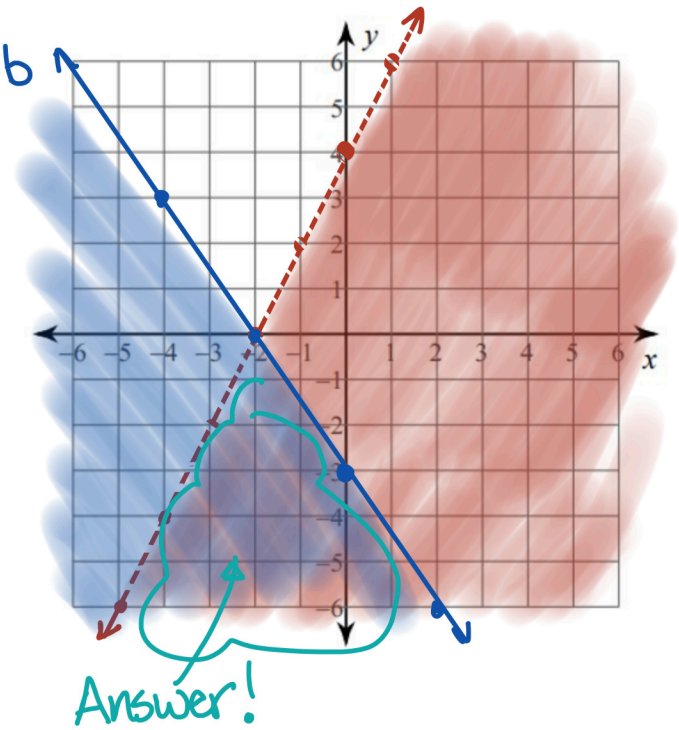
get into mx+b

$+3x \quad +3x$

$$\frac{-2y}{-2} \geq \frac{3x}{-2} + \frac{6}{-2}$$

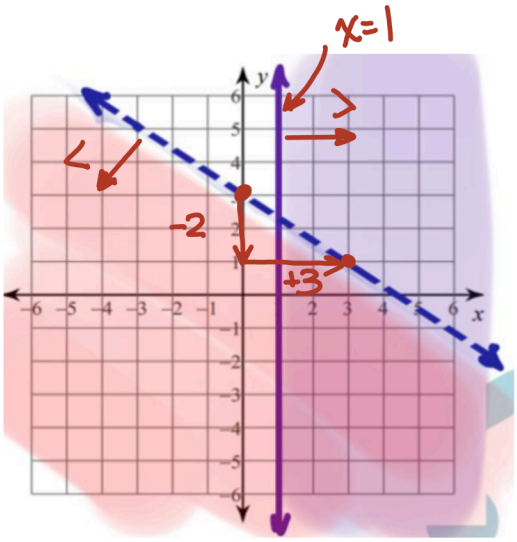
$$y \leq -\frac{3}{2}x - 3$$

3 ↓ 2 → y-int



Write a system of inequalities from this graph:

1. Get the equations off the graph.
2. Decide if it is *greater than* or *less than*.
3. Decide if it is "*or equal to*" (solid) or not (dotted).



vertical line:
1. $x = 1$
2. $x > 1$
3. solid, $x \geq 1$

slant line:
1. $y = mx + b$
   $-\frac{2}{3}x + 3$
2. $y < -\frac{2}{3}x + 3$
3. dotted, so no line underneath

$y < -\frac{2}{3}x + 3$