

Systems of Equations: Lesson 8

Systems of Inequalities: Worksheet 1

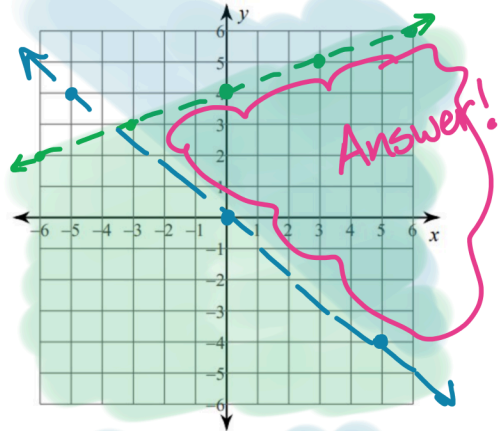
Name: Answer Key



Solve.

$$\begin{cases} y < \frac{1}{3}x + 4 \\ y > -\frac{4}{5}x \end{cases}$$

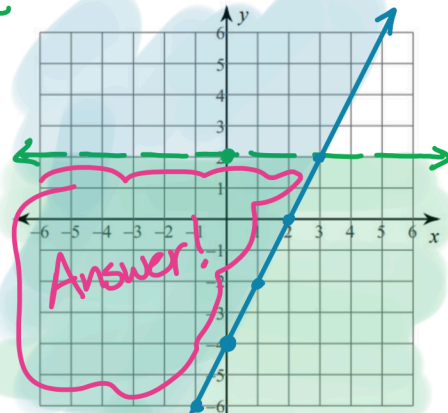
slope $\frac{1}{3}$ *y.int* 4 *dotted line*
shade under
y.int 0 *dotted line*
slope $-\frac{4}{5}$ *shade above*



$$\begin{cases} y < 2 \\ 4x - 2y \leq 8 \end{cases}$$

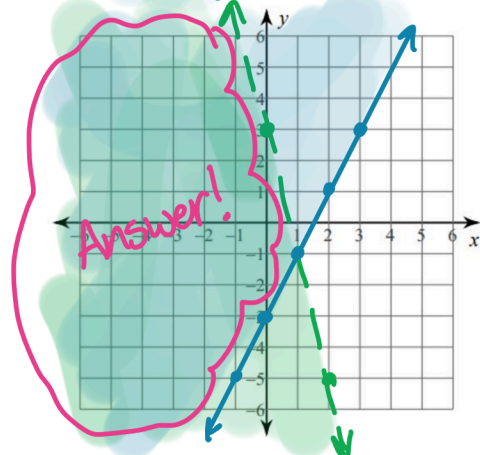
horizontal line at 2
shade under *dotted line*
 turn into $y = mx + b$

$$\frac{4x - 2y \leq 8}{-4x \quad -4x} \Rightarrow \frac{-2y \leq -4x + 8}{-2 \quad -2 \quad -2} \Rightarrow y \geq \frac{2}{1}x - 4$$
slope 2 *y.int* -4 *solid line*
shade above

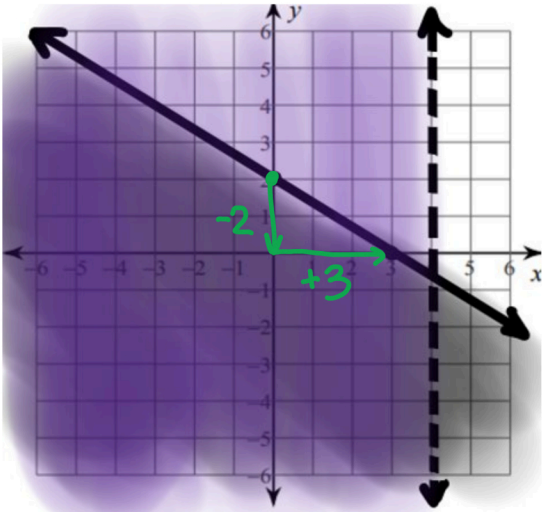


$$\begin{cases} y < -\frac{4}{3}x + 3 \\ y \geq \frac{2}{1}x - 3 \end{cases}$$

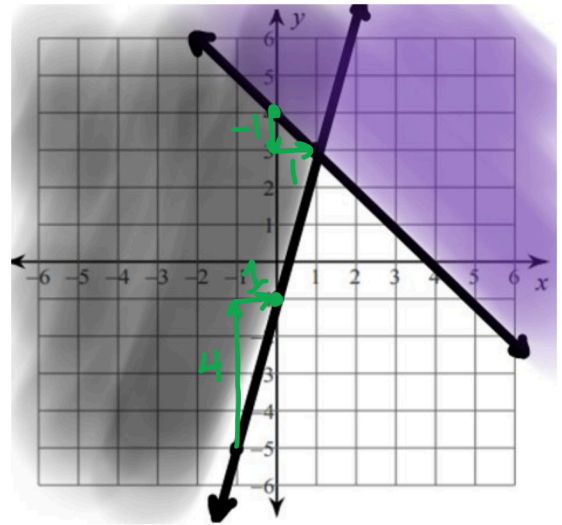
slope $-\frac{4}{3}$ *y.int* 3 *dotted line*
shade below
y.int -3 *solid line*
shade above



Write a system of inequalities from the graphs:



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



$$y \geq 4x - 1$$
$$y \leq -x + 4$$