

Name: _____

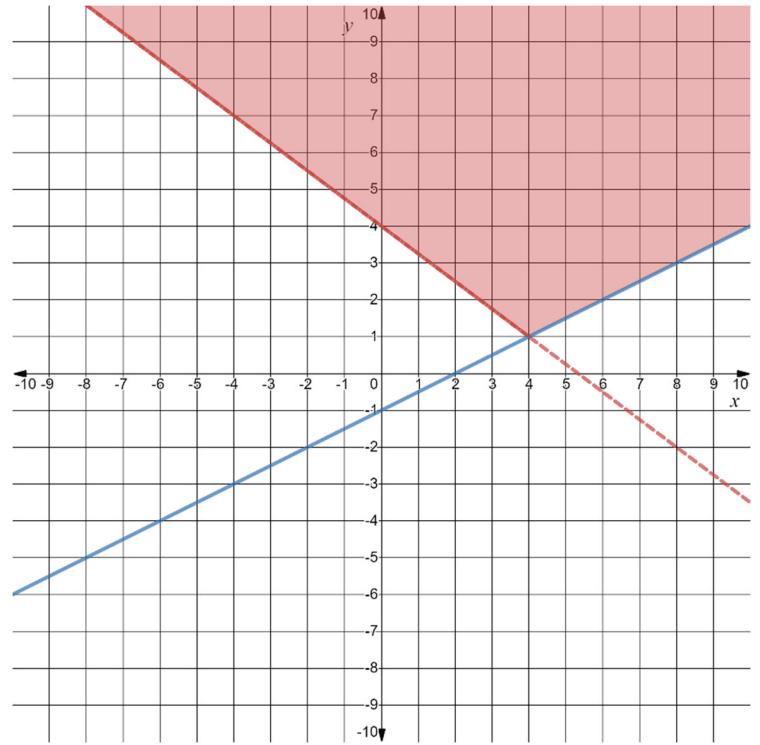
Date: _____

1. Find the solution region of the following systems of linear inequalities. Assume $x \in \mathbb{R}$ and $y \in \mathbb{R}$.

a.

$$y > -\frac{3}{4}x + 4$$

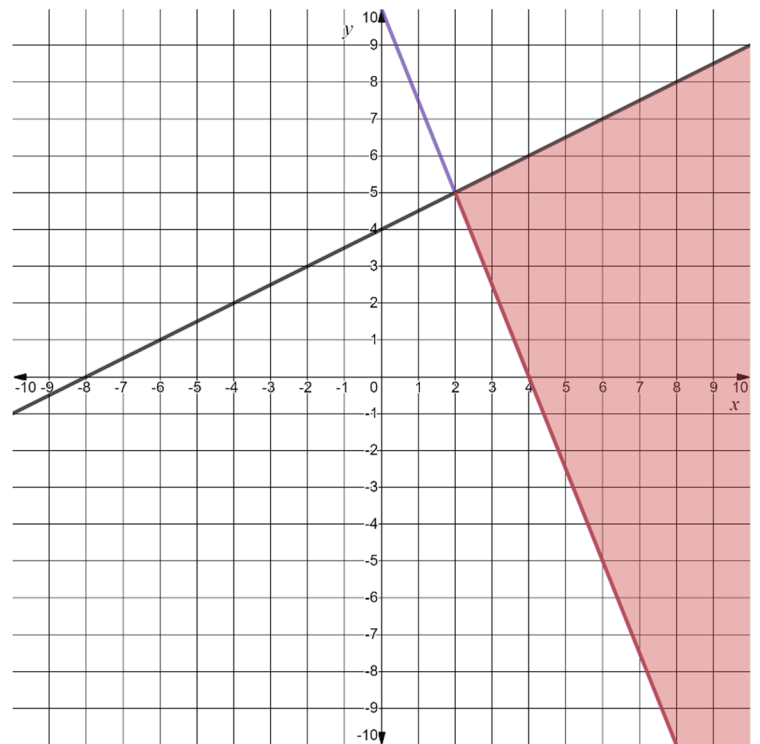
$$y > \frac{1}{2}x - 1$$



b.

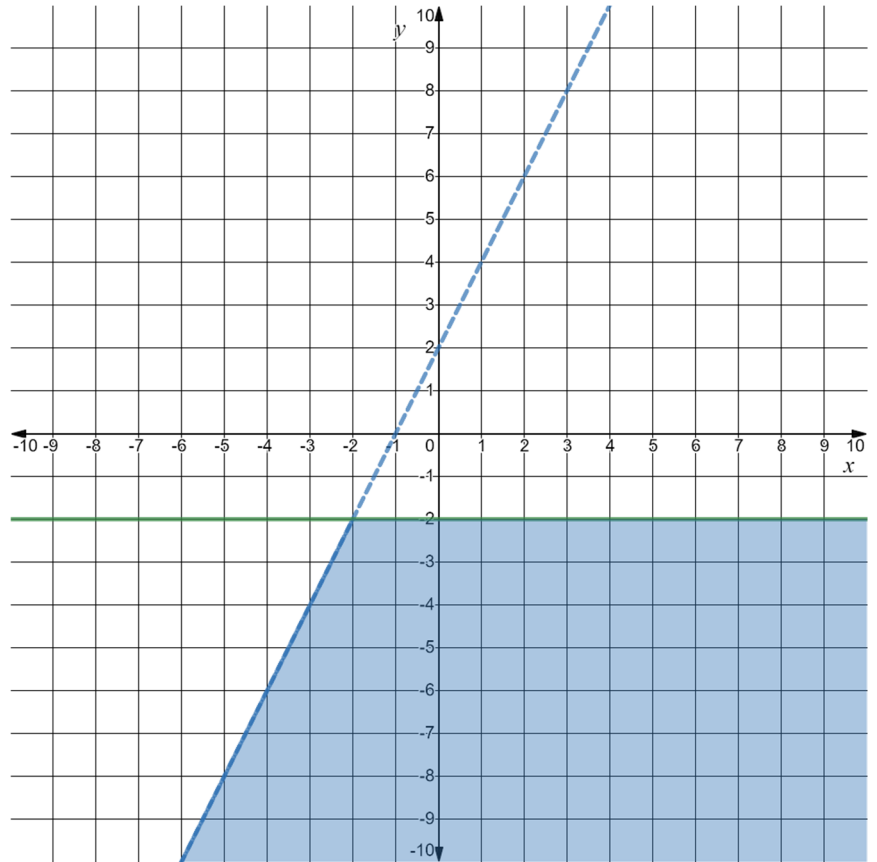
$$y \geq -\frac{5}{2}x + 10$$

$$y \leq \frac{1}{2}x + 4$$



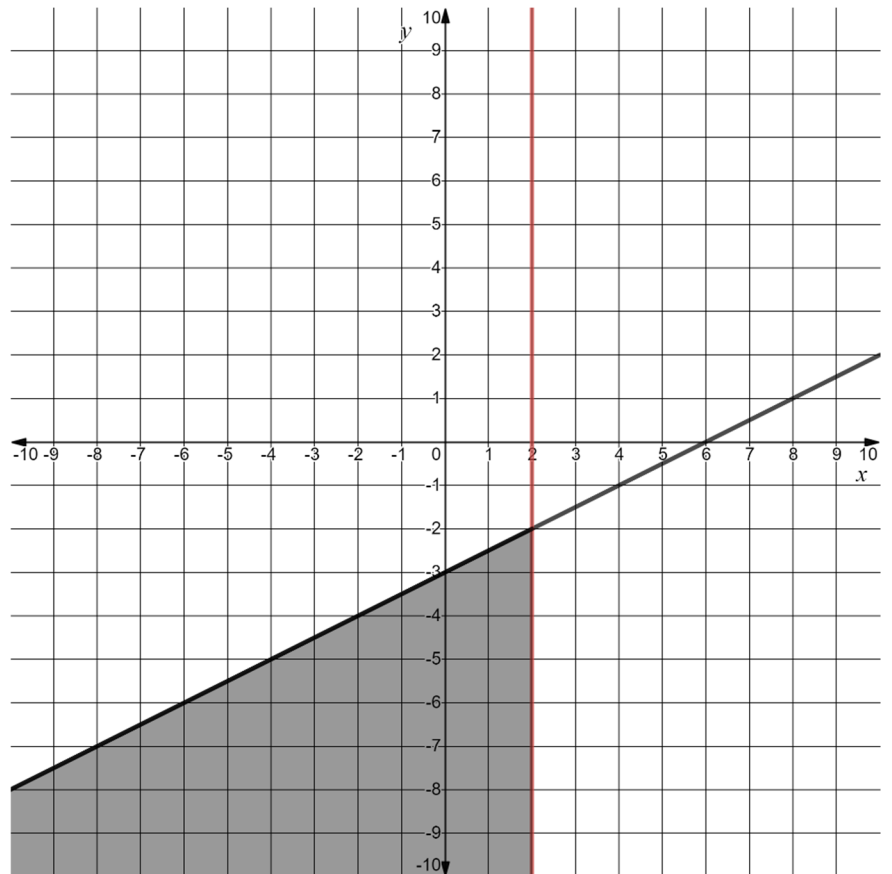
c.

$$y < 2x + 2$$
$$y \leq -2$$



d.

$$x - 2y \geq 6$$
$$x \leq 2$$

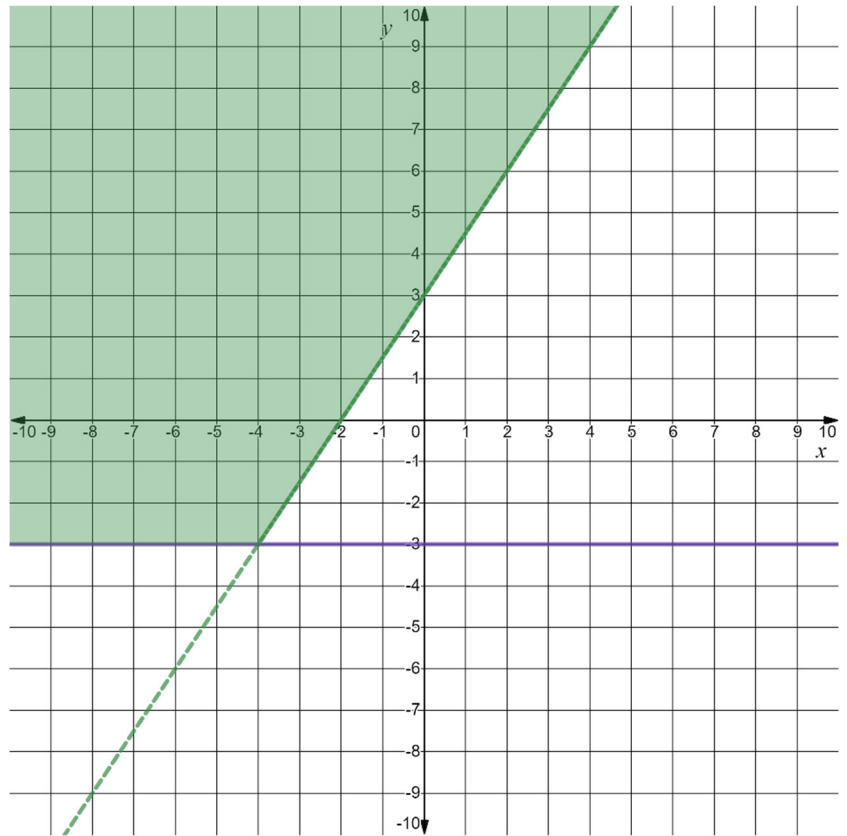


2. Find the solution region of the following systems of linear inequalities. Assume $x \in \mathbb{Z}$ and $y \in \mathbb{Z}$

a.

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

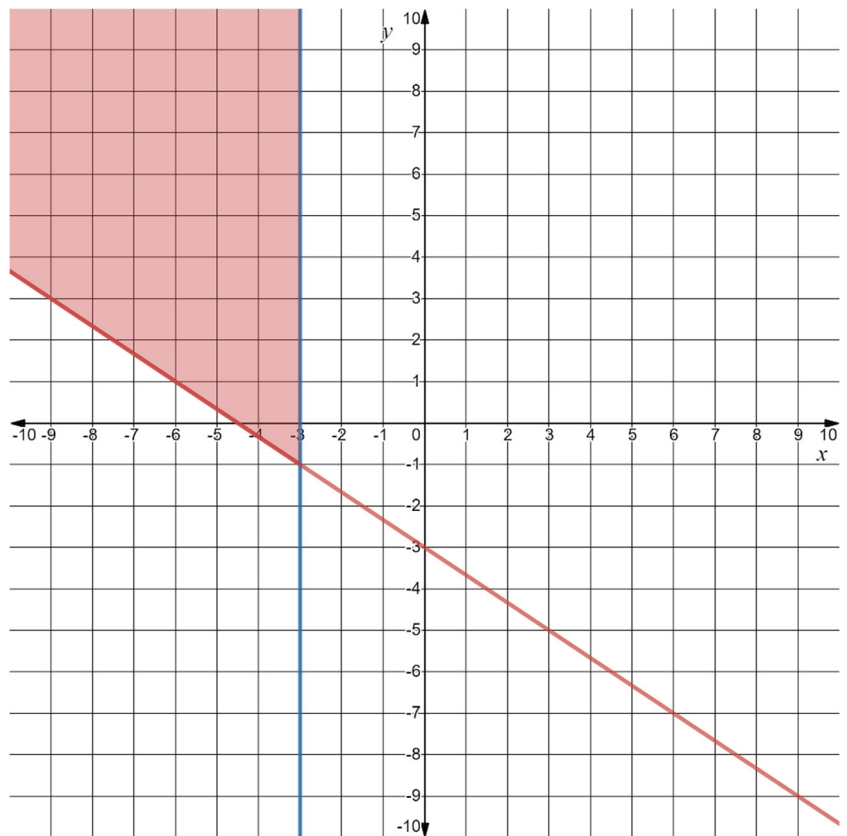
$$y > -3$$



b.

$$2x + 3y \geq -9$$

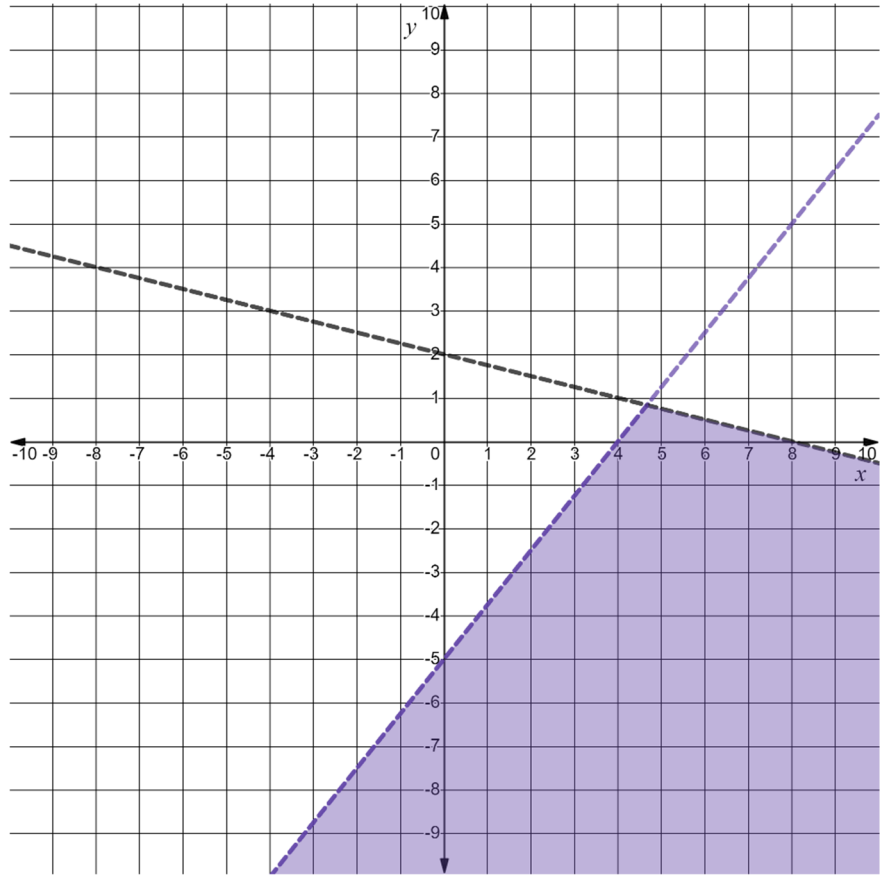
$$x \leq -3$$



c.

$$5x - 4y > 20$$

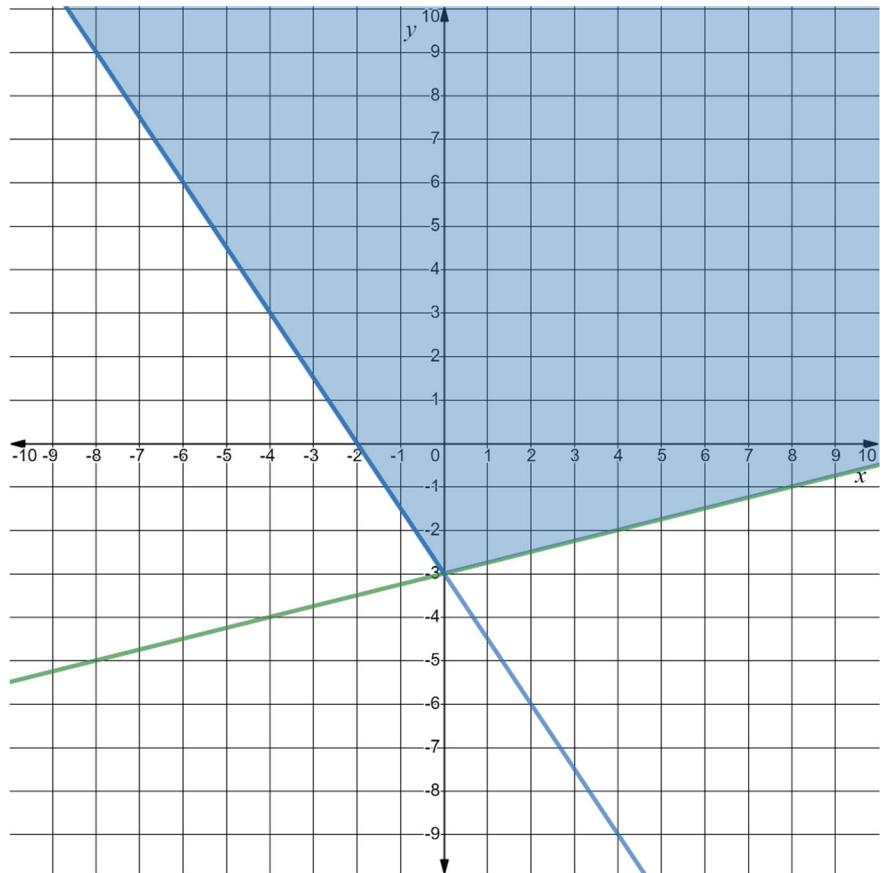
$$x + 4y < 8$$



d.

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

$$y \geq \frac{1}{4}x - 3$$

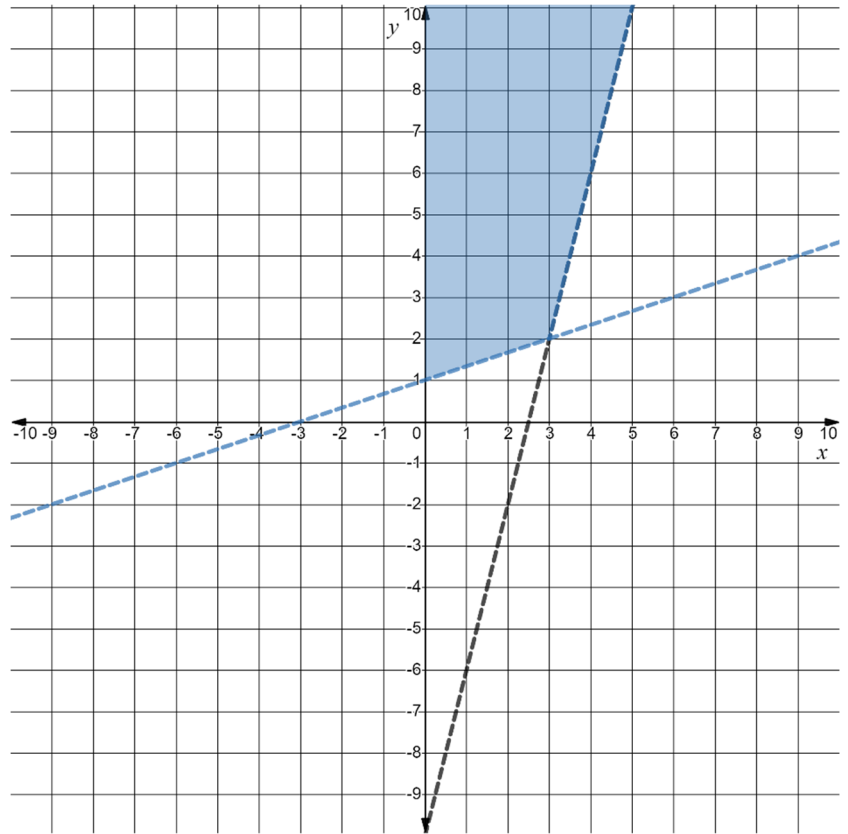


3. Find the solution region of the following systems of linear inequalities. Assume $x \in \mathbb{W}$ and $y \in \mathbb{W}$

a.

$$y > 4x - 10$$

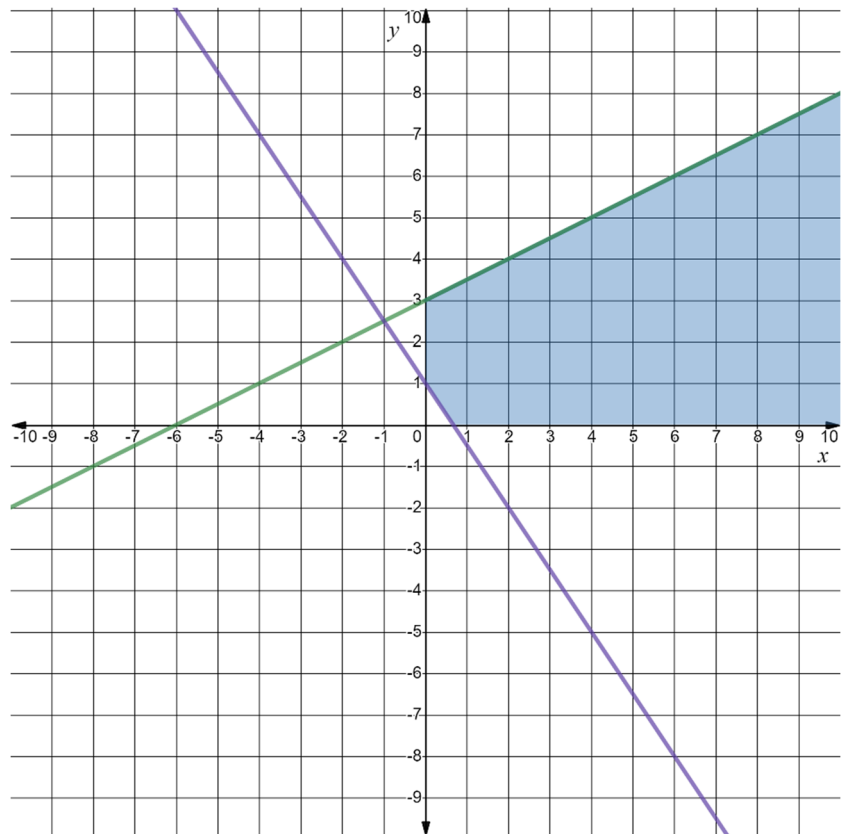
$$y > \frac{1}{3}x + 1$$



b.

$$x - 2y \geq -6$$

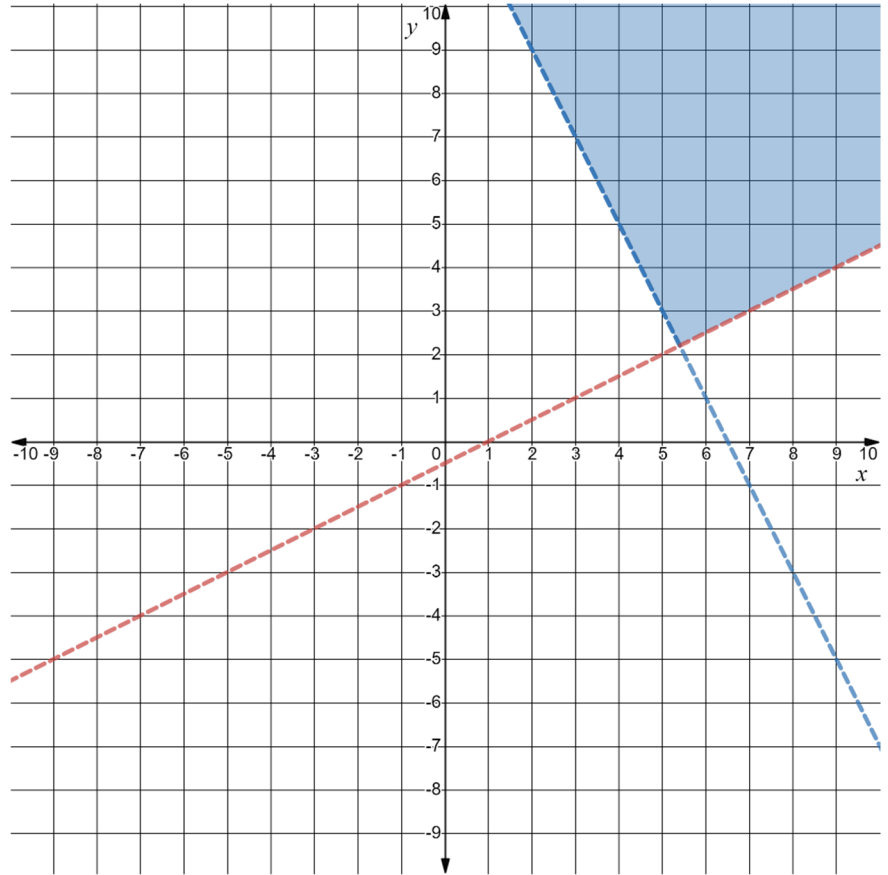
$$3x + 2y \geq 2$$



c.

$$y - 3 > -2(x - 5)$$

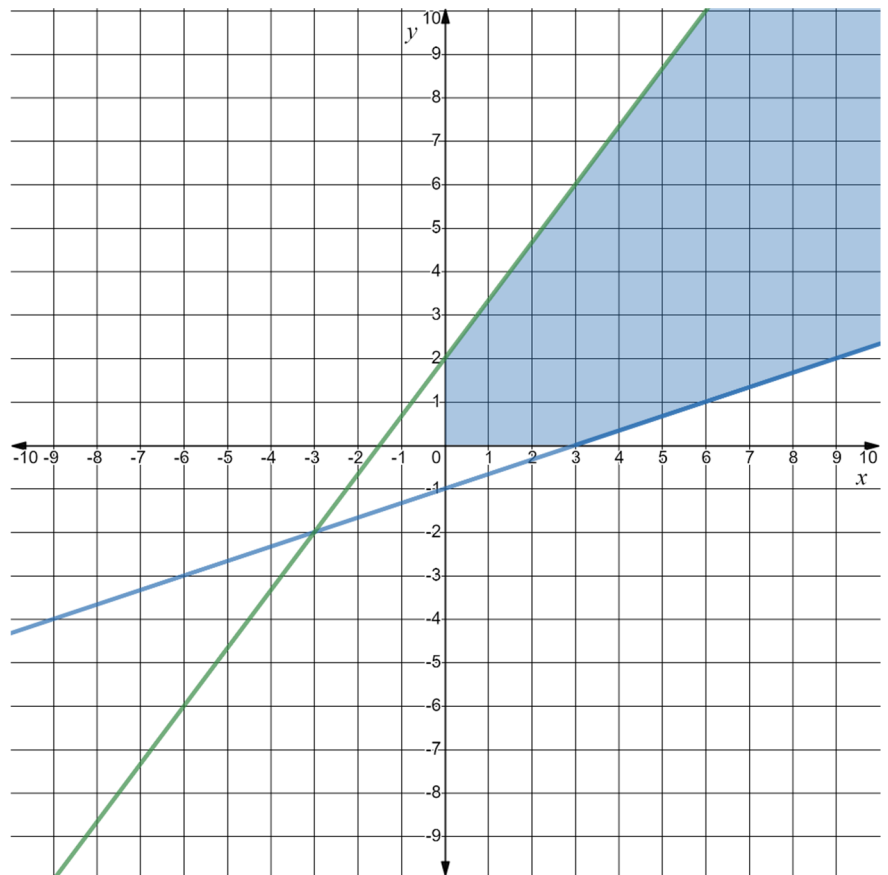
$$y + 1 > \frac{1}{2}(x + 1)$$



d.

$$y \geq \frac{1}{3}x - 1$$

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

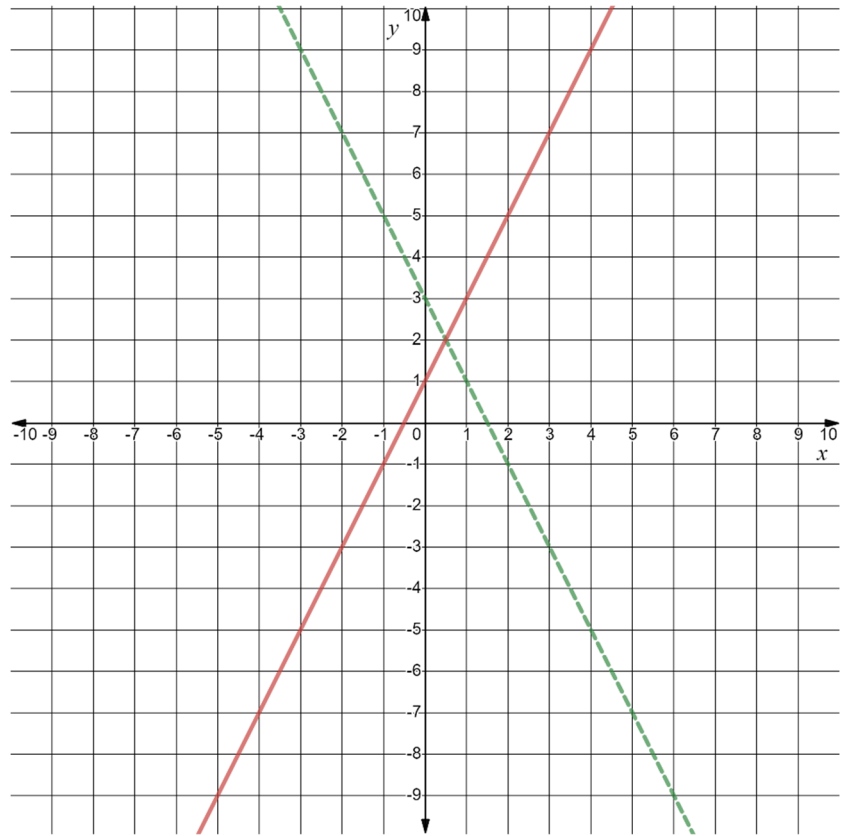


4. Find the solution region of the following systems of linear inequalities. Assume $x \in \mathbb{N}$ and $y \in \mathbb{N}$

e.

$$2x + y < -3$$

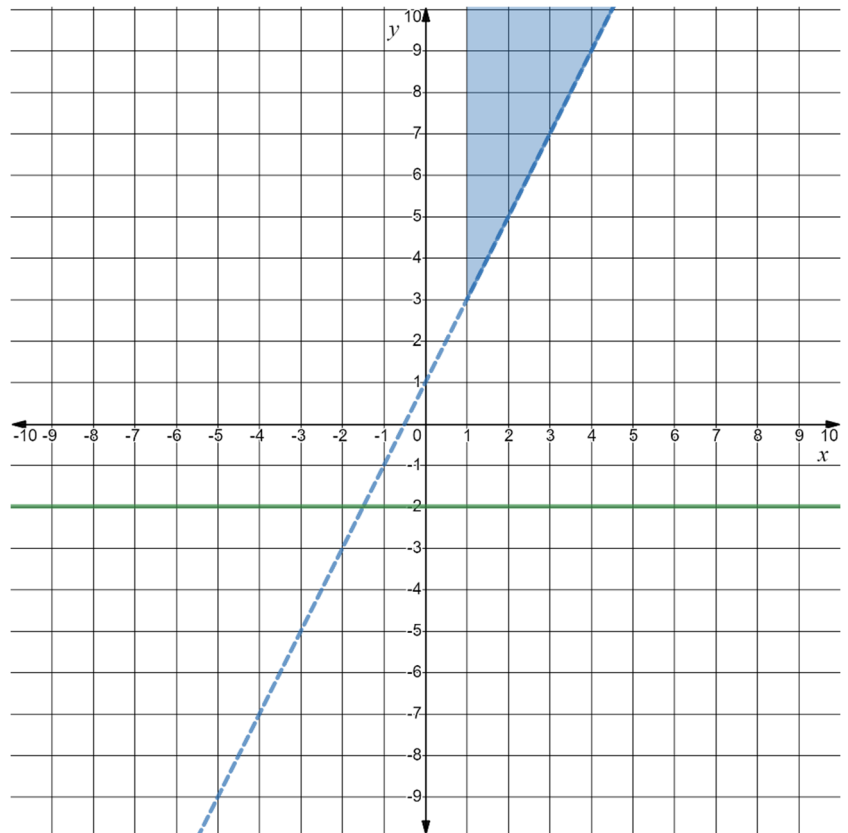
$$2x - y \leq -1$$



f.

$$y > 2x + 2$$

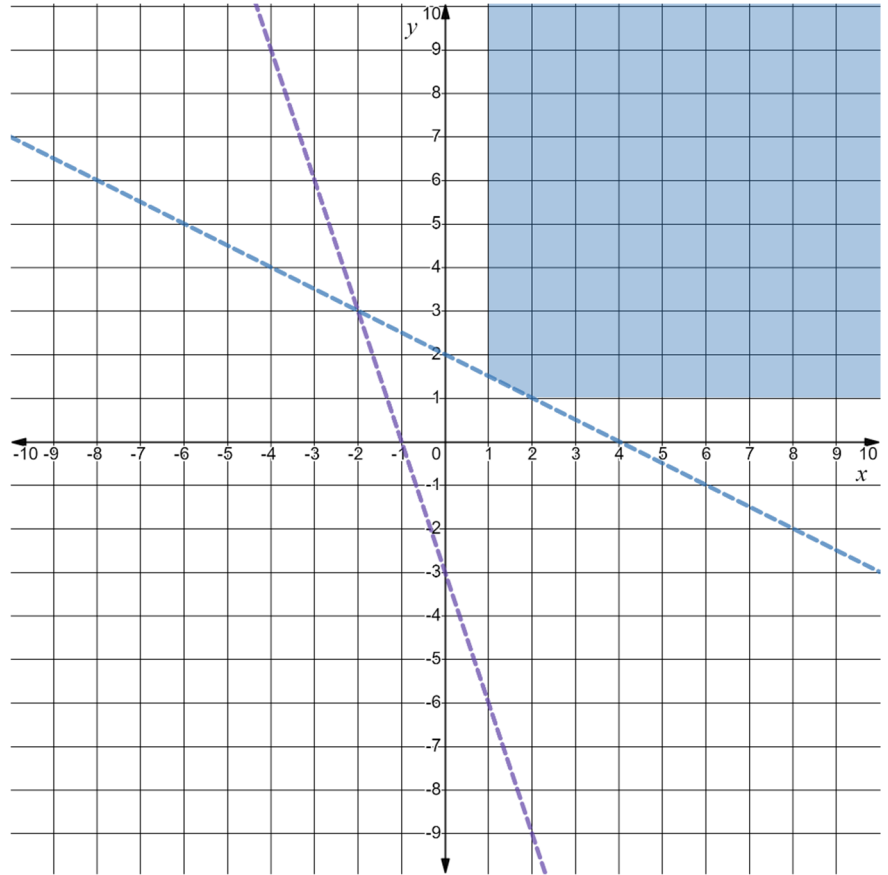
$$y \geq -2$$



g.

$$3x + y > -3$$

$$x + 2y > 4$$



h.

$$y < \frac{5}{3}x + 2$$

$$y < 4x - 4$$

