

Steps for Graphing Systems of Inequalities

1. Write in slope-intercept form
2. Graph the y-intercept
3. Find next points using slope
4. Connect with **DASHED** or **SOLID** line
5. **SHADE ABOVE** or **BELOW**
6. Repeat steps 1-5 for ^{second} inequality
7. **SOLUTION IS INTERSECTION of shading**

$y = mx + b$
where m is slope
and b is y-intercept

Example: Solve the system of inequalities by graphing.

$$3x - 4y < 4$$

$$x + 2y \leq 8$$

$$3x - 4y < 4$$

$$\frac{-3x}{-4} < \frac{-3x + 4}{-4}$$

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

FLIP!
dashed above
slope
y-int

$$x + 2y \leq 8$$

$$\frac{-x}{2} \leq \frac{-x + 8}{2}$$

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

solid & below
slope
y-int

* Shade above

$$>, \geq$$

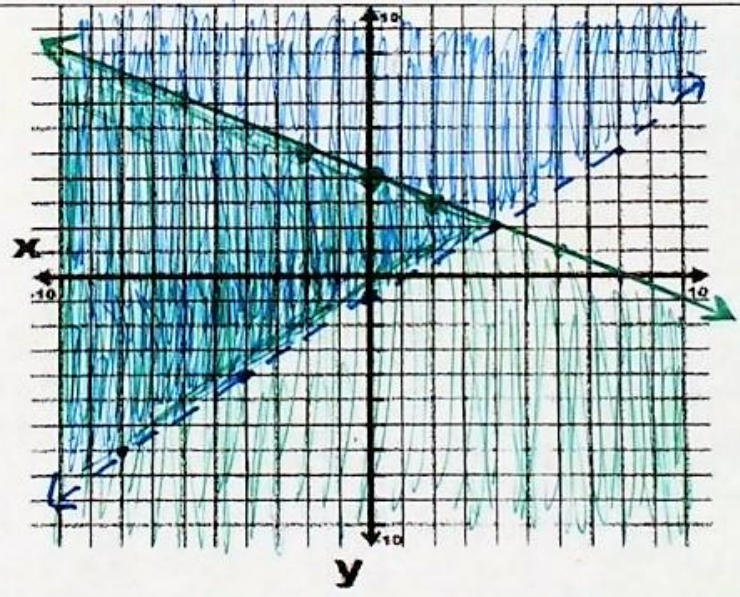
* Shade below

$$<, \leq$$

* Solid Line

$$\geq, \leq$$

* Dashed Line

$$>, <$$


SYSTEMS OF LINEAR INEQUALITIES