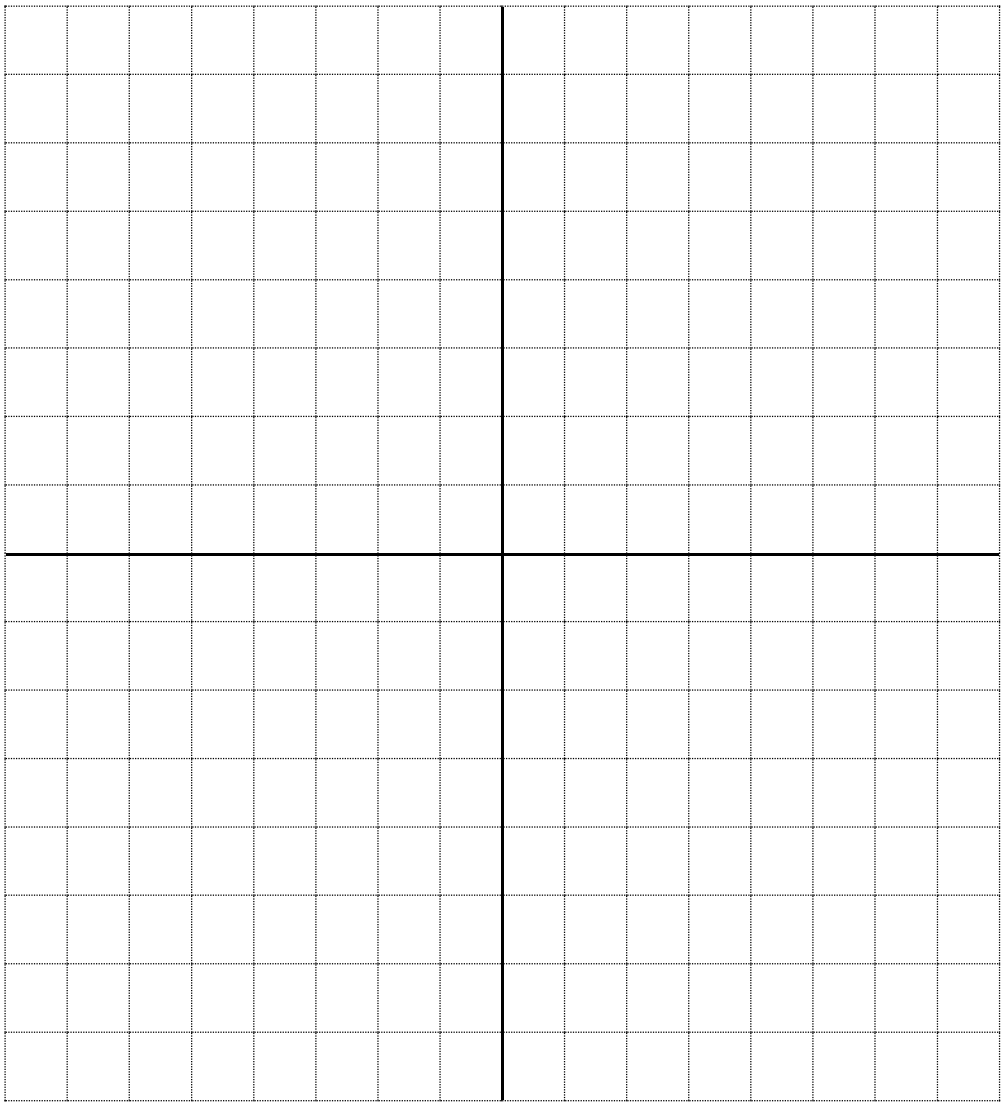
Lesson 5: Equations of Lines in Standard Form

Warm-Up

Graph these lines. Tell me what you notice:

$4x-6y+24=0$ and $y=\frac{2}{3}x+4$



Forms of Equations

$y = mx + b$ is called the slope, y-intercept form of a line

$Ax + By + C = 0$ is called the Standard Form of a line

- where A is a positive integer and B and C are integers
- just another way of writing the equation
- still has the same slope and y-intercept as the same equation written in the slope/y-intercept form

Example 1

Write the equation of the line $y = 3x + 6$ in standard form.

Example 2

Write the equation of the line $y = -\frac{3}{2}x + 7$ in standard form.

Example 3

Write the equation of the line $y = \frac{1}{3}x + 8$ in standard form.

Example 4

Write the equation of the line with a slope of $\frac{-3}{4}$ that passes through the point (0, 6) in standard form.

Homework: p.319 #5, 6, 8