Name: _____ Date: _____

Learning Goal 6.2	Constructing and using the following forms of a linear equation: • Slope – Intercept Form $y = mx + b$, • Slope – Point Form $y - y_1 = m(x - x_1)$, and • General Form $Ax + By + C = 0$.

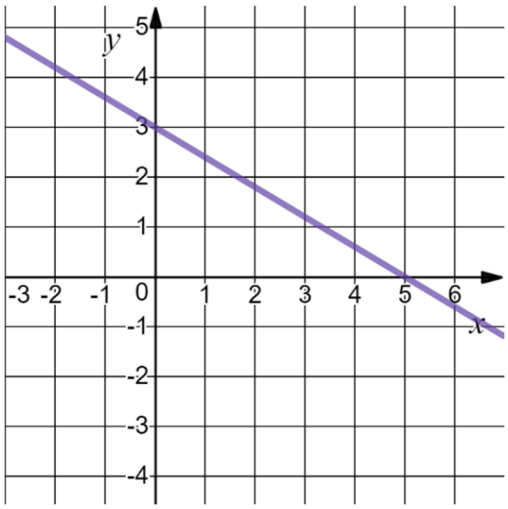
Equation of a Line	
Slope-Intercept Form	Slope-Point Form
General Form	Standard Form

Example Each of the following equations represent a line. How do we know? Which of these lines is properly written in general form?

a. $213x - 3y - 336 = 0$ b. $-2x + 3y + 6 = 0$ c. $\frac{2}{5}x + \frac{2}{6}y + 6 = 0$ d. $2x + y = 15$

Example Find the x-intercept, y-intercept and slope for the line:

a. $2x - 5y + 10 = 0$

b. 

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Example Find the $x-$ and $y-$ intercepts then convert to slope-intercept form.

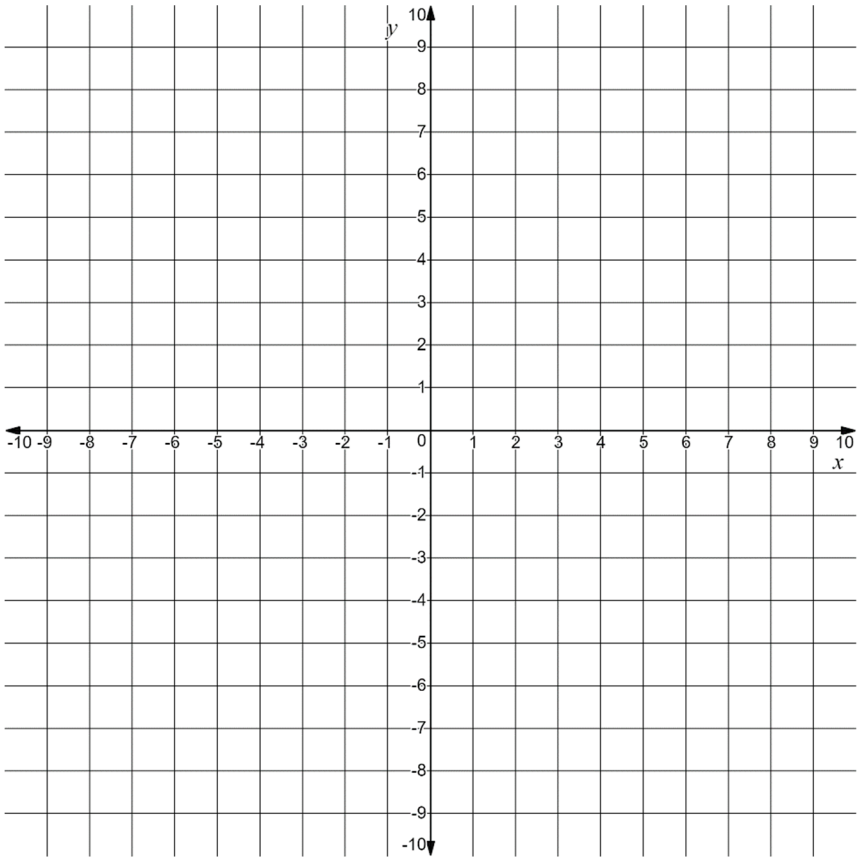
a. $4x - 16y + 24 = 0$ b. $3x - 10y + 30 = 0$

Example Graph each of the following lines according to their intercepts.

a. $2x - 3y + 6 = 0$

b. $5x + 3y - 9 = 0$

c. $7x - 5y = 14$



Example The equation of a line is $2x - 3y - k = 0$. Point $C(3, -5)$ is on the line. What is the value of k?