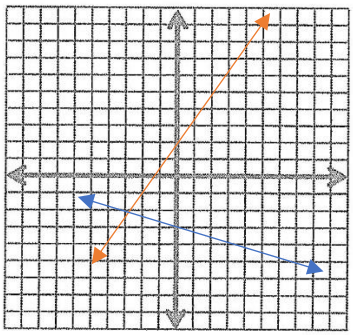
Name_____ **Notes Video 4 Writing linear equations**

Slope-Intercept form	**Point-Slope form**	**Standard form**
$y = mx + b$	$y - y_1 = m(x - x_1)$	$ax + by = c$
		

Writing linear equations: $\boldsymbol{m = \frac{y_2 - y_1}{x_2 - x_1}}$ $(\mathbf{3}, \mathbf{-4})$ $(\mathbf{-5}, \mathbf{-7})$

Parallel Lines- same slope

Perpendicular Lines- Opp. Rec. slope

a. Write an equation in point-slope for if given $(-2, 7)$ and $(5, 3)$

b. Write an equation in slope-intercept form given $(8, -2)\ and\ (1, 5)$

c. Write an equation in standard form given $(1, -2)\ and\ (4, 5)$

Practice:

Write an equation in point-slope that is parallel to $y = \frac{2}{3}x + 5 \quad passing\ thru\ (1, -3)$

Write an equation in slope-intercept form that is perpendicular to $2x - 4y = 8 \quad passing\ thru\ (2, 5)$

Write an equation in all three forms given $(4, 2)\ and\ (6, 5)$

Write an equation given a) $(3, -5)\ and\ (3, 7)$

b) $(4, 6)\ and\ (-8, 6)$