Video #3 A2 Summer 24- graphing linear functions and inequalities

Function- Set of x and y data, each input (x, domain) and unique output (y, range)

Linear Functions Review

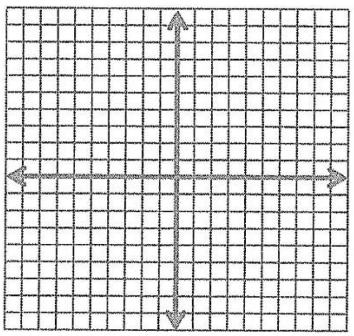
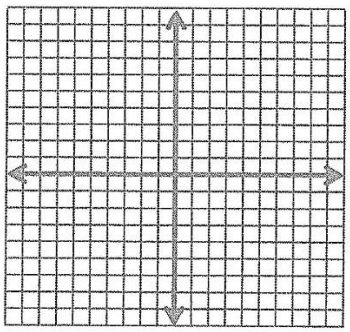
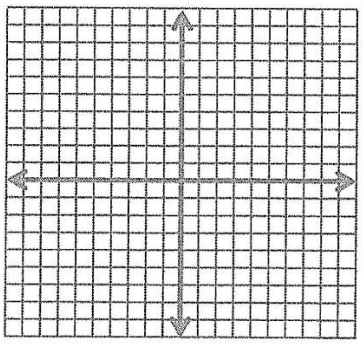
Three different forms for graphing linear functions:

Slope-intercept form $y = mx + b$

Point-slope form $y - y_1 = m(x - x_1)$

Standard form $ax + by + c$

- No fractions
- "a" is positive coefficient

Slope-Intercept form	**Point-Slope form**	**Standard form**
$y = mx + b$	$y - y_1 = m(x - x_1)$	$ax + by = c$
Graph $y = \frac{1}{3}x - 5$  What are the four possible slopes for all lines?	Graph $y - 4 = -\frac{3}{4}(x + 1)$ 	Graph $2x - 5y = 10$ 

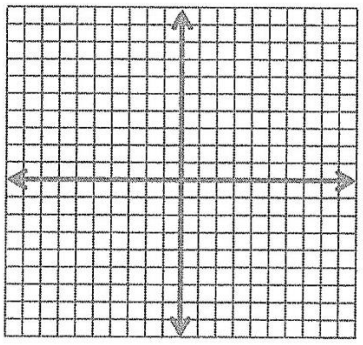
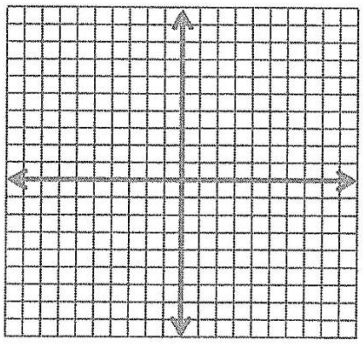
Slope formula: $\frac{y_2 - y_1}{x_2 - x_1} = m$ **Parallel Lines** **Perpendicular Lines**

Practice:

$a.\quad -3y = 2x + 9$ b. $y + 2 = 3\,(x - 5)$ $c.\ 3x + 7y = 21$

d. $x = 3$ e. $y = -4$

Inequalities:

Graph $y > 2x - 4$	Graph $-5x - 2y \geq 4$
	

f. $\frac{1}{2}y - 3x \leq 1$

$y > -5$