

Unit 4 Organizer - 3 Different Forms of LINEAR EQUATIONS

Slope-Intercept Form	Standard Form	Point-Slope Form
<p>$y = mx + b$ ↑ Slope ↑ y-intercept</p> <p>What does this form tell us? It tells us where to start (y-intercept) and what direction to go (slope = $\frac{\text{rise}}{\text{run}}$)</p> <p>When should we use this form to write an equation? Slope: Each, every, per Start: Begins with, starts at, initially, ($x=0$) Use $y = mx + b$ when one thing depends on another</p> <p>Lin plants a seedling. (Each day it grows 1.5cm. When he bought it, it was 125cm tall. $x = \text{days}$, $y = 1.5x + 125$ $y = \text{height}$)</p>	<p>$Ax + By = C$ ↑ Total</p> <p>What does this form tell us? Tells us how much "x" & "y" are "worth" and tells us the total</p> <p>When should we use this form to write an equation? Use $Ax + By = C$ when two unknowns combine to make a total.</p> <p>Lin buys apples & bananas. He buys 3 apples & 5 bananas for \$15. $3x + 5y = 15$ $x = \text{apples}$, $y = \text{bananas}$</p>	<p>$y = m(x - x_1) + y_1$ ↑ slope ↑ point</p> <p>What does this form tell us? (x_1, y_1)</p> <p>It tells us a point on the graph (x_1, y_1) and what direction to go (slope = $\frac{\text{rise}}{\text{run}}$)</p> <p>When should we use this form to write an equation? Use $y = m(x - x_1) + y_1$ when one thing depends on another.</p> <p>Lin plants a seedling. Each day it grows 1.5cm. 10 days after he bought it, it was 140cm tall. $y = 1.5(x - 10) + 140$ $x = \text{days}$, $y = \text{height}$</p>