

Forms of Linear Equations		
Equation	Description	When to Use
$y = mx + b$	Slope-Intercept Form Slope is m . y -intercept is $(0, b)$	The slope and y -intercept can be easily identified and used to quickly graph the equation.
$y - y_1 = m(x - x_1)$	Point-Slope Form Slope is m . Line passes through (x_1, y_1)	This form is ideal for finding the equation of a line if the slope and a point on the line or two points on the line are known
$Ax + By = C$	Standard Form ($A, B,$ and C integers, $A \geq 0$) Slope is $-\frac{A}{B}$ ($B \neq 0$)	The x - and y -intercepts can be found quickly and used to graph the equation. The slope must be calculated
$y = b$	Horizontal Line Slope is 0 y -intercept is $(0, b)$	If the graph intersects only the y -axis, then y is the only variable in the equation
$x = a$	Vertical Line Slope is undefined x -intercept is $(a, 0)$	If the graph intersects only the x -axis, then x is the only variable in the equation