

## Vocabulary Toolkit

	Term	Definition / Additional Information
4.1 T	Domain	The set of input values for which the function is defined.
4.1 T	Discrete Function	Functions in which the variables have a finite number of values (countable, such as the number of dogs in pet sitters can only be whole numbers or my little sister adds three pennies each day). The graph is non-connected points.
4.1 T	Continuous Function	Functions in which the variables can take on any value within an interval (measurable to infinitely small increments, such as the amount of water in the pool as it is filled with a hose or length of my hair over time before it is cut). The graph is smooth without any gaps or breaks.
4.2 T	Linear Function	A function that changes in equal differences over equal intervals. This constant rate of change is called the slope of the line. Usually in the form: $f(x) = ax + b$ .
4.2 T	Exponential Function	A function that changes in equal factors over equal intervals. That is, the function grows (or shrinks) at a rate which increases (or decreases) by common factor. Usually in the form: $f(x) = ab^x$ , where $b > 0$
4.3 T	Change Factor	In exponential functions, the constant factor over the equal interval. Also known as a “multiplier”.
4.6 R	Intercept	The $x$ -intercept of a line is the point at which the line crosses the $x$ axis, where the $y$ value equals 0. <span style="float: right;"><math>x</math>-intercept : <math>(x, 0)</math></span>  The $y$ -intercept of a line is the point at which the line crosses the $y$ axis, where the $x$ value equals 0. <span style="float: right;"><math>y</math>-intercept: <math>(0, y)</math></span>
4.7 R	Slope-intercept form (of a linear equation)	$y = mx + b$ , where $m$ is the slope and $(0, b)$ is the $y$ -intercept.
4.7 R	Point-Slope form (of a linear equation)	$y = m(x - x_1) + y_1$ , where $m$ is the slope and $(x_1, y_1)$ the coordinates of a point on the line.
4.8 T	Standard form (of a linear equation)	$Ax + By = C$ , where $A$ and $B$ are not both equal to zero.