<u>**SM3 Unit 1-1 Vocabulary**</u>

<u>Relation</u>: A "<u>mapping</u>" or pairing of <u>input</u> values to <u>output</u> <u>values</u>.

<u>Function</u>: A relation where each <u>input</u> has <u>exactly</u> one <u>output</u>.

<u>Domain</u>: the <u>set</u> made up of <u>all</u> of the <u>input values</u> that <u>have corresponding output values</u>.

<u>Range</u>: the <u>set</u> made up of <u>all</u> of the <u>corresponding output values.</u>

<u>6 ways to show a relation</u> between <u>input</u> and <u>output</u> values.
(1) ordered pairs, (2) table, (3) graph, (4) equation, (5) mapping, and (6) "function notation"

<u>Function Notation</u>: When we say "y is a function of x" we mean We are "<u>doing math</u>" (performing mathematical operations) on the input value 'x' to determine the corresponding output value 'y'. $y = f(x)$

<u>y-intercept</u>: the x-y pair where a graph crosses the y-axis, or, the y-value that corresponds an input value of zero, or the value 'b' in the equation y = mx + b.
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<u>Solution of a two-variable equation</u>: all x-y pairs that make the equation "true".

<u>Delta</u> a Greek letter (that looks like a triangle → Δ) used in engineering and math to denote "change."

<u>Slope</u> (of a line) is its steepness calculated as the change in 'y' and the change in 'x' between two points given by: $m = \dfrac{\Delta y}{\Delta x}$

<u>Slope</u> is the coefficient of 'x' when the equation is written in the form: y = mx + b

<u>Linear relation</u> has a constant slope, it's steepness does not change, or the calculation of $m = \dfrac{\Delta y}{\Delta x}$ between <u>any</u> two points of the relation is always the same number.