Math-2: Lesson 1-1 (Basic Vocabulary)

"Expression" (a math "phrase") A name or a symbol for a number: 4 x + 3 3x + 4y - 2

"Statement" (a math sentence) A meaningful assertion that is either true or false. The most common "statement" is an equation. x + 3 = 5

Another "statement" could be an inequality. x + 3 ≤ 5

Equivalence The expression or numbers on either side of an 'equal sign' are equivalent to each other and can be substituted for each other wherever they are found.

Equivalent Equations: Equations that have the same solution.

Solution: the number (or numbers) that when substituted in for the unknown value will make the statement true.

unknown value: a letter or symbol that has only one solution. Unknown values occur in single variable equations.

variable: A letter or symbol can have many values as the solution. Variables occur in single variable inequalities, and in multiple variable equations.

Terms The individual numbers, variables, or unknown values in an expression or an equation that are separated by either a "+" or "-" sign.

"Monomial" an expression with only 1 term

"Binomial" an expression with 2 "unlike" terms

"Trinomial" an expression with 3 "unlike' terms

Unlike Terms: cannot be combined into a single term using addition or subtraction.

Coefficient The number in front of (touching—multiplying) a variable in an expression or equation.

Constant A term in an expression or an equation that does not contain a variable or unknown value—a recognizable number

Math-2: Lesson 1-1 (Basic Vocabulary) (continued)

Sum The equivalent value when you add (or subtract) two or more number.

Addends The numbers that are added together to get the sum.

Factors The numbers that are multiplied together to get an equivalent value.

"Product" The equivalent value of factors multiplied together.

Quotient The equivalent value of one number divided by another number.

Dividend The number that is being divided or the numerator of a fraction.

Divisor The number that divides the dividend or the denominator of a fraction.

Mathematical Property: a general rule that, when applied to an expression or an equation, results in an **equivalent, more simplified** expression or equation.

Math-2: Lesson 1-1 (Basic Properties)

Identity Property of Addition Adding zero to a number results in the original number being the sum. $5 + 0 = 5$
Think: "zero added to any number will not change the "identity" of the number."

Inverse Property of Addition Adding a number to its "opposite" (sign) results in zero as the sum. $5 + (-5) = 0$
Think of the additive inverse of a number as the "opposite" or "negative" of the number.

Identity Property of Multiplication Multiplying any number by one results in the original number being the product. $5(1) = 5$
Think: "one multiplied by any number will not change the "identity" of the number."

Inverse Property of Multiplication Any number multiplied by its reciprocal will always is equivalent to '1'. $5 \times \frac{1}{5} = 1$

Any number divided by itself always is equivalent to '1'. $5 \div 5 = 1$ or $\frac{5}{5} = 1$