

1.02 Algebraic Expression

Vocabulary

Variable: A letter that represents an unknown number.
(ex. $a + 2 \rightarrow a + 2$)

Term: Expression are made up of terms separated by plus or minus signs.
(ex. $2x + 5 - 3x \rightarrow \underline{2x} + \underline{5} - \underline{3x}$)

Factors: Numbers that multiply together to produce a product.
(ex. $3x \rightarrow 3x$)

Coefficient: When multiplying a number and a variable, the number listed is the coefficient. ***Remember, the coefficient of x is 1.***
(ex. x by itself stands for $1x$; $5x \rightarrow 5x$)

Constant: Numbers that stand alone.
(ex. $3x + 5 \rightarrow 3x + 5$)

Exponent: Shorthand that tells how many times the base is used as a factor, or how many times the base is multiplied by itself.
(ex. $2 \times 2 \times 2 \rightarrow 2^3$)

Combining Like Terms: is the process of adding or subtracting like terms to simplify an expression.

1.02 Algebraic Expressions

Watch for exponents and negatives!

$$2x + 5y + 2z + 2y + z + 3x$$

$$2x + 5y + 2z + 2y + z + 3x$$
$$5x + 7y + 3z$$

$$4x^2 + 4x + 3x^2 + 8x + 5y^2 + 10$$

$$4x^2 + 4x + 3x^2 + 8x + 5y^2 + 10$$
$$7x^2 + 12x + 5y^2 + 10$$

$$6x - 7x + 8y - 3y^2 + (-2y)$$

$$6x - 7x + 8y - 3y^2 + (-2y)$$
$$-x + 6y - 3y^2$$

Simplify the expressions.

1. $4x^2 + 5y + 3x + 2x^2 - 2y$

2. $4x^3 + x^2 - 2x^3 + 5$

3. $10x^5 + 3(2x^5 - 4b^2)$