Math Study Strategies

Algebraic Expressions and Equations

Algebraic expressions contain numbers and letters (variables).

The number which precedes the letter is called **coefficient.**

The letter in the expression or equation is the **variable.**

Term is a number or a product of a number and one or more variable raised to a power.

To **evaluate an expression**, **REPLACE** the variable with the given value and use the order of operation to find the value of the expression.

Like terms are terms which have the same variable raised to the same power.

To **combine like terms,** add or subtract the coefficient and attach the common variable.

Algebraic equation is a statement that two expressions are equal.

Solution is the value for the variable in the equation that makes the statement true.

To **solve the equation**, **ISOLATE** the variable by the following steps:

- Add or subtract the like terms so that on one side will be the numbers and on the other side the variable.

- Multiply or divide both sides of the equation so that the variable will stay alone on one side.

- Check your solution in the original equation.

Ex 1: $x + 3 = 5$

$$x + 3 = 5$$
$$x + 3 - 3 = 5 - 3$$
$$x + 0 = 2$$
$$x = 2$$

Check : $2 + 3 = 5$ True

Ex 2: $3x = 6$

$$x = 2$$
$$\frac{3x}{3} = \frac{6}{3}$$

Check: $3(2) = 6$ True

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