Order of Operations

Order of Operations Definition: The order we use to solve equations. (The order in which we perform operations when evaluating mathematical expressions is called **order of operations**.)

Ex. $3 + 4 \cdot 2 - 6 \div 3$

        $3 + 4 \cdot 2 - 6 \div 3$ Restate the Problem

        $3 + 8 - 2$ Multiply and Divide (left to right)

        11 – 2 = 9   Add and Subtract (left to right)

P – Parentheses   **Inverse Operations:** Operations are inverses if they "undo" each other.

E – Exponents   Ex. Multiplication and Division are inverse operations

M – Multiplication   Ex. Addition and Subtractions are inverse Operations

D – Division

A – Addition   Inverse Operations are performed left to right when following PEMDAS

S – Subtraction

Ex. $(5 \: + \: 2 \cdot 5) \div 3 \cdot 2$

        $(5 \: + \: 2 \cdot 5) \div 3 \cdot 2$ Restate the Problem

        $(5 + 10) \div 3 \cdot 2$ Follow PEMDAS in Parentheses by Multiplying and Dividing

        $15 \div 3 \cdot 2$ Parentheses

        $5 \cdot 2 = 10$ Multiply and Divide (left to right)