

Lesson 2

Order of Operations (PEMDAS)

Lesson

When an expression has several operations, we follow a specific order:

P - Parentheses first

E - Exponents (powers)

M/D - Multiplication and Division (left to right)

A/S - Addition and Subtraction (left to right)

This rule ensures everyone gets the same answer for the same expression.

Example: Simplify $3 + 4 * (2^2 - 1)$

Step 1: Parentheses first -- evaluate the exponent inside

$$3 + 4 * (4 - 1)$$

Step 2: Finish parentheses

$$3 + 4 * 3$$

Step 3: Multiply before adding

$$3 + 12$$

Step 4: Add

$$= 15$$

Practice Problems

1) Simplify: $5 + 3 * 2$

2) Simplify: $(5 + 3) * 2$

3) Simplify: $4^2 - 3 \cdot 2 + 1$

4) Simplify: $(10 - 4)^2 / 9$

5) Simplify: $2 \cdot (3 + 5) - 4^2$

6) Simplify: $18 / (2 + 4) + 3^2$

7) Simplify: $5 \cdot 2^3 - (12 - 7)$
