

## 6.2 Order of Operations

***Objective: Use the correct order of operations***



# Order of Operations

1. Perform operations inside grouping symbols (**Parentheses**, brackets, braces)
2. Solve **Exponents**
3. **Multiply or Divide**, whichever comes first from left to right
4. **Add or Subtract**, whichever comes first from left to right

**Please Excuse My Dear Aunt Sally!**  
(left to right)

**PEMA**  
**DS**

# Examples

$$\begin{aligned} 1. & 10 + 4 \cdot 2 \\ & 10 + 8 \\ & 18 \end{aligned}$$

$$\begin{aligned} 2. & 12 - 2(3 + 1) \\ & 12 - 2(4) \\ & 12 - 8 \\ & 4 \end{aligned}$$

$$\begin{aligned} 3. & 200 \div (5 + 5)^2 \cdot 2 \\ & 200 \div 10^2 \cdot 2 \\ & 200 \div 100 \cdot 2 \\ & 2 \cdot 2 \\ & 4 \end{aligned}$$

$$\begin{aligned} 4. & \text{Evaluate the expression} \\ & 6n - 6 \text{ when } n = 4 \\ & 6 \cdot 4 - 6 \\ & 24 - 6 \\ & 18 \end{aligned}$$

$$\begin{aligned} 5. & \text{Evaluate the expression} \\ & w \div (z - 4) \cdot y \text{ when} \\ & w = 20, z = 14, y = 11 \\ & 20 \div (14 - 4) \cdot 11 \\ & 20 \div 10 \cdot 11 \\ & 2 \cdot 11 \\ & 22 \end{aligned}$$

# Examples

$$6. 9 + 4^3 \cdot (20 - 8) \div 2 + 6$$

$$9 + 4^3 \cdot 12 \div 2 + 6$$

$$9 + 64 \cdot 12 \div 2 + 6$$

$$9 + 768 \div 2 + 6$$

$$9 + 384 + 6$$

$$393 + 6$$

$$399$$

7. The Molina family went to a concert together. They purchased 4 concert tickets for \$25 each, 3 T-shirts for \$15 each, and a poster for \$10. Write an expression for the total cost then find the total cost.

$$4 \cdot 25 + 3 \cdot 15 + 10$$

$$\$155$$