Assignment: Applying Order of Operations

Directions: Use the order of operations to simplify the expressions. Show each step in your work. Describe each step in words. See the example below:

Example: Simplify the expression \((3 + 6 ÷ 2)^3\).

a. Simplify within parentheses first, division before addition: \((3 + 6 ÷ 2)^3 = (3 + 3)^3\)

b. Within the parentheses, perform addition: \((3 + 3)^3 = 6^3\)

c. Apply the exponent: \(6^3 = 216\)

1. Simplify the expression \(7 - 2(2 + 5) - 8\).

2. Simplify the expression \(15 + 3 - 2(2 - 1)\).

3. Simplify the expression \(3[9 − (2 ÷ 3)]\).

4. Simplify the expression \(225 ÷ (7 − 4)^2 − 15\).

5. Simplify the expression \(200 − 5(4 − 1)^3\).