# Section 2.5

## TERMINOLOGY 2.5

For the following term, provide 1) a definition in your own words, 2) the formal definition (as provided by your text or instructor), and 3) an example of the term using a drawing or problem.

Order of Operations

| | |
|---|---|
| **Your definition** | |
| **Formal definition** | |
| **Example** | |

## READING AND SELF-DISCOVERY QUESTIONS 2.5

1. How would you describe the Order of Operations to another student?

   **Simplify what is inside parentheses first and simplify exponentiation second. Then compute multiplication and division as they occur, left to right. Finally, perform addition and subtraction as they occur, left to right.**

2. What phrase do you use to help you remember the Order of Operations? (If you don't yet have one, create one now and share it here.)

   **PEMDAS, or Please Excuse My Dear Aunt Sally. Any other phrase like that works too.**

## CRITICAL THINKING QUESTION 2.5

1. Why is the Order of Operations important?

   **The Order of Operations is important because it allows different people to arrive at the same answer for a calculation. If these rules did not exist, $2 + 3 \times 4$ could be either 14 (using the Order of Operations and performing the multiplication first) or 20, if doing the addition first.**

# IDENTIFY AND CORRECT THE ERROR 2.5

In the second column, identify the error(s) you find in the following worked solution. Describe the error made in the second column. Solve the problem correctly in the third column.

| Problem | Describe Error | Correct Process |
|---|---|---|
| Simplify: $5 - 3(7 - 2^2)$<br>**Worked Solution**<br>*(What is wrong here?)*<br>$5 - 21 - (2)^2$<br>$5 - 21 - 4$<br>$5 - 25$<br>**$-20$** | **The distributive property is not applied correctly.** | $5 - 3(7 - 2^2)$<br>$5 - 3(7 - 4)$<br>$5 - 21 + 12$<br>$-16 + 12$<br>$-4$ |