

Order of Operations Video Lecture

Section 1.4

Course Learning Objective:

Simplify expressions numerically.

Weekly Learning Objectives:

- 1) Define and use exponents and the order of operations.**
- 2) Find the absolute value of a real number.**
- 3) Evaluate algebraic expressions, given replacement values for variables.**

Order of Operations

P = Parentheses or any grouping symbol

E = Exponents

M = Multiplication

Done in order from LEFT to RIGHT

D = Division

A = Addition

Done in order from LEFT to RIGHT

S = Subtraction

Examples:

$$\textcircled{1} \frac{3^3 - 5[2^2 \div 2 - 1]}{4 + 6 \cdot 3}$$

$$\textcircled{2} -24 \div (-3)(2) \div (-1)(-2 - 2)$$

$$\textcircled{3} \quad |-15 - 3(-2)| - |-5|$$

$$\textcircled{4} \quad \frac{8(-1) - |(-4)(-3)|}{-6 - (-1)}$$

$$\textcircled{5} \quad (2 - 6) \div \frac{-2 - 6}{-3 - 6} = -\frac{1}{2}$$

$$\textcircled{6} \quad \text{Simplify } \frac{-mn^2 - m}{n - m} \text{ when } m = -3 \text{ and } n = -2$$

