Elementary Review #4: BEDMAS and Substitution

Recall: BEDMAS stands for Brackets, Exponents, Division, Multiplication, Addition and Subtraction. This rule tells us the order in which we should evaluate expressions.

Example 1: Simplify the following.

(a)
$$\begin{aligned} & 3\times5-6\div2 \\ =\ & 15-6\div2 \\ =\ & 15-3 \\ =\ & 12 \end{aligned}$$

(b)
$$\begin{aligned} & (3-4)^2\times(19-7\times4+9) \\ =\ & (-1)^2\times(19-28+9) \\ =\ & 1\times(-9+9) \\ =\ & 1\times0 \\ =\ & 0 \end{aligned}$$

Substitution is a process where we replace a variable (letter) with a number (or something else…). When you substitute, you should always **use brackets** around what you're substituting… this will clarify what you need to do.

Example 2: Substitute the indicated value(s) into each expression and simplify.

(a) $3x-7$ $\quad x = 3$ $3x-7$ $=3(3)-7$ $=9-7$	(b) $2L+2W$ $\quad L = 10,\ W = 5$ $2(10)+2(5)$ $=20+10$ $=30$
(c) $\sqrt{a^2+b^2}$ $\quad a = 12,\ b = 5$ $\sqrt{12^2+5^2}$ $=\sqrt{144+25}$ $=\sqrt{169}$ $=13$	(d) $\dfrac{g+15}{2g}$ $\quad g = -3$ $\dfrac{(-3)+15}{2(-3)}$ $=\dfrac{12}{-6}$ $=-2$

Homework: Skills package - pg. 11 #1 – 8.