9/20/11

Review of the Distributive Property

Ex. 1: $3(x + 4) = 3 \cdot x + 3 \cdot 4 = 3x + 12$ Use Santa Hat

Ex. 2: $2(y + 1) = 2 \cdot y + 2 \cdot 1 = 2y + 1$

Ex. 3: $4(x + y) = 4 \cdot x + 4 \cdot y = 4x + 4y$

Ex. 4: $-5(x + 2) = -5x + -10 = -5x - 10$ Use MAD Man

Ex. 5: $(x + 3)4 = 4(x + 3) = 4x + 12$

Ex. 6: $3(2x + 4) = 6x + 12$

Ex. 7: $-4(x - 5) = -4x - -20 = -4x + 20$

2-4: <u>Evaluating Expressions & Combining Like Terms</u>

Evaluating Expressions

A **variable** is a letter that stands for a number. An **expression** is a math phrase that uses numbers, variables, and operation symbols.

To evaluate an expression that contains variables:

1. Replace each variable with a given number.
2. Use the order of operations to simplify.

Ex. 1: Evaluate $4y - 15$ for $y = 9$

$4y - 15 = 4(9) - 15$

$= 36 - 15$

$= 21$

Ex. 2: Evaluate $4(t + 3) + 1$ for $t = 8$

$4(t + 3) + 1 = 4(8 + 3) + 1$

$= 4(11) + 1$

$= 44 + 1$

$= 45$

Ex. 3: Evaluate $3ab + \frac{c}{2}$ for a = 2, b = 5, and c = 10

$3ab + \frac{c}{2} = 3 \cdot 2 \cdot 5 + \frac{10}{2}$

$= 3 \cdot 2 \cdot 5 + 5$

$= 6 \cdot 5 + 5$

$= 30 + 5 = 35$

Combining Like Terms

Combining cows, pigs, and chickens.

A **term** is a number or the product of a number and variable(s).

A **constant** is a term that has no variables.

Like terms have the same variables.

A **coefficient** is a number that multiplies to a variable.

Ex. 1: $7a + 4a + 3b + 6$

Ex. 2: $2x + 3 + 7x = 5x + 3$

Ex. 3: $2(5w + 3) - 4w = 10w + 6 - 4w = 6w + 6$

Ex. 4: $6t + 3s - t + 6s = 5t + 9s$

Ex: 5: $-4(y - 2) - 2 = -4y + 8 - 2 = -4y + 6$