Chapter 1-2 and 1-3 Notes: Words, Variables, and Expressions

<u>Quick Review - Order of Operations</u>
1) Parentheses, Brackets, and Fractions Bars
2) Exponents
3) Multiplication and/or Division in the order they appear moving from left to right
4) Addition and/or Subtraction in the order they appear moving from left to right

Evaluate.

1) $3[(18-6) + 2(4)]$

$3[12 + 2(4)]$

$3[12 + 8]$

$3[20]$

60

Evaluate.

2) $\dfrac{49 + 31}{19 - 14}$

$$\dfrac{80}{5} = \dfrac{16}{1} \text{ or } 16$$

3) Maddie earns an allowance of $5 per week. She also earns $8 per hour for babysitting and she normally babysits 6 hours a week. Write an expression that represents her typical weekly earnings. What does she earn in a week if she babysits 7 hours? 8 hours?

$$5 + 6(8) = \$53$$

$$5 + 7(8) = \$61$$

$$5 + 8(8) = \$69$$

Algebraic Expression : an expression that contains
1) a variable(s)
2) number(s)
3) operation(s)
** it is helpful to define the variable

Write an expression for the situation.

4) 35 (more) than a number of tickets sold

$$t = \text{tickets sold}$$

$$35 + t \quad \text{or} \quad t + 35$$

5) the (difference) of six (times) a number and 10

$$n = \text{number}$$

$$6n - 10$$

Evaluate if x = 3, y = 4, and z = 7.

6) 5z + (x + 4y) - 15

$$5(7) + (3 + 4(4)) - 15$$

$$35 + (3 + 16) - 15$$

$$35 + 19 - 15$$

$$\boxed{39}$$