1.3 Algebraic Expressions p. 16

**Definitions**:

**Variable**: an algebraic expression such as x and n (which represent ANY number).

**Examples of algebraic expressions and their meanings:**

**x + 5**: five **more** than a number  
 or a number plus five

**n – 4**: four **less** than a number  
 or a number subtract 4

**4 – n**: four **subtract** a number

**5n** : Five **times** a number

Note: in algebra we do not use the “**times**” symbol “**x**” as it would be mistaken as a variable. We simply write the number in front of the variable!

**6n + 2**: six **times** a number, then **add** two  
 or two more than six times a number

**10/n**: ten **divided** by a number

Note: the **slash** symbol can be used to represent division

**In the algebraic expression: 6t - 4**

6 is the **numerical coefficient** (this will always be the number next to the variable)

t is the **variable** (the letter in the expression)

4 is the **constant term** (the number being added or subtracted in the expression

**You can use an algebraic expression to solve similar problems more easily.**

Example: Suppose you earn $9 per hour. If you worked 3 hours, you earn: 3 x $9 = $27.   
If you worked “t” hours (an unknown amount of time) you earn:

**t x $9 = 9t**

(Remember: Multiplication in algebra is written without a "times" symbol and the numerical coefficient is always written in front of the variable!)

**We evaluate an algebraic expression by substituting in a value for the variable.**

Example: **Evaluate 3f -2 for f = 5.**

Solution: We substitute the 5 for the letter f in the expression as follows:

(3)(5) - 2 (Note: The order of operations tells us we must multiply before subtracting)

= 15 - 2

=13

**Together:** p. 17 A & **Homework:** p. 18 # 1-10