Math 60, Sections 2.3-2.4 Class Prep Assignment Name:_____

Watch the videos and take notes on this page Due at the Beginning of Next Class

Section 2.3 Combining Like Terms

1. Cross out the items that cannot be combined. Circle the items that you can combine readily. Underline the items that could be combined with additional steps.

$\text{cats} + \text{dogs}$ $8+9$ $\text{feet} + \text{pounds}$ $x+y$ $3 \text{ apples} - 2 \text{ apples}$ $\frac{2}{7}+\frac{3}{7}$

$\frac{1}{4}+\frac{2}{11}$ $\text{miles} \div \text{hours}$ $\frac{1}{2}\cdot\frac{3}{4}$ $2x+5x$ x^2+3x^2 $\text{miles} - \text{feet}$

Notice that we can only add and subtract like quantities. We can multiply and divide any quantities.

2. Simplify the following expressions by combining like terms, if possible.

a. $12x+8x$

b. $8x-8y$

c. $2t-5t$

d. $3x^2+x$

Section 2.4 Equations and Inequalities as True/False Statements

An **equation** is a statement that two expressions are equal. An **inequality** compares two expressions with an inequality symbol.

3. Make up some examples of equations and inequalities. What is the difference between an expression and an equation?

Equations and inequalities can be very complex with multiple variables and operations. In Math 60 we will study **linear equations and inequalities,** which have one variable and cannot have any exponents on the variable (other than 1). There cannot be any variables in a square root or denominator.

4. Make up some examples of <u>linear</u> equations and inequalities.

5. Make up some examples of equations and inequalities that are <u>not linear</u>.

<u>Checking Possible Solutions</u>

A solution to an equation or inequality is a value that makes the statement true.

6. Check each equation or inequality to see whether the given number is a solution.

a. Is 5 a solution to $y+10=15$?

b. Is -4 a solution to $3x=12$?

c. Is -3 a solution to $2x+7\le 15$?

d. Is -2 a solution to $\frac{1}{2}r-5<2(r-1)$?