Concepts of Algebra 2 Notes **Section 3-2: Solving Systems Algebraically**

***Objective:**

Steps for using SUBSTITUTION
1) Isolate one of the variables.

2) Substitute for that variable in the other equation.

3) Solve for the other variable.

Got It? **1.** What is the solution of the system of equations? $\begin{cases} x + 3y = 5 \\ -2x - 4y = -5 \end{cases}$

Got It? **2.** An online music company offers 15 downloads for \$19.75 and 40 downloads for \$43.50. Each price includes the same one-time registration fee. What is the cost of each download and the registration fee?

Steps for using ELIMINATION

1) Obtain additive inverses by multiplying none, one, or both equations by a number.

2) Add the two equations to eliminate one variable.

3) Solve for the remaining variable.

*equivalent systems:

The answer is NOT always unique. You may get INFITITELY MANY SOLUTIONS or NO SOLUTION.

Got It? **3.** What is the solution of the system of equations? $\begin{cases} -2x + 8y = -8 \\ 5x - 8y = 20 \end{cases}$

Got It? **4. a.** What is the solution of this system of equations? $\begin{cases} 3x + 7y = 15 \\ 5x + 2y = -4 \end{cases}$

Got It? **5.** What are the solutions of the following systems? Explain.

a. $\begin{cases} -x + y = -2 \\ 2x - 2y = 0 \end{cases}$

b. $\begin{cases} 4x + y = 6 \\ 12x + 3y = 18 \end{cases}$

Inclass: p. 146 #14, 20, 38
Homework: p. 146 #11-41(odd)
Interactmath: #10, 13, 15, 19, 22, 24, 26, 33, 34, 37, 41