Week Plan - Nov 11-15 Algebra 1 B

Monday - Teacher Parent Conferences and inservice trainings = no school for students

Tuesday -

- Warmup - FINISH #3 and other problems (4-7, 13) from pg. 83 soft practice book on substitution method.
- We have completed #1,2,8,9,10 and skipping # 11,12

Wednesday -

- Kuta Day - use handout and work in small groups on setup problems for the first 30 minutes of class then
- Use the links on google classroom to review answers as working on setting up WORD problems applying to using a system of equations.

Thursday -

- Warmup with pg 82 # 12 as a single equation and pg 84 # 11 setting up word problems again for a system.
- Organize notes for Friday's test

FRIDAY - Quiz on graphing method and substitution method.

Chapter 5: Keystone Objective

ASSESSMENT ANCHOR A1.1.2 Linear Equations				
Anchor Descriptor		**Eligible Content**		**PA Core Standards**
A1.1.2.2	Write, solve, and/or graph systems of linear equations using various methods.	**A1.1.2.2.1**	Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination. Note: Limit systems to two linear equations.	**CC.2.1.HS.F.5** **CC.2.2.8.B.3** **CC.2.2.HS.D.7** **CC.2.2.HS.D.9** **CC.2.2.HS.D.10**
		A1.1.2.2.2	Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear equations.	

Week Objective from textbook sections 5.2

Section 5.2: Solving Systems of Linear Equations by Substitution

Common Core State Standards: A.CED.A.3, A.REI.C.6
Learning Target: Solve linear systems by substitution.
Success Criteria

- Solve a system of linear equations by substitution.
- Solve a linear equation in two variables for either variable.
- Solve real-life problems using substitution.

$y = 2x + 5$ Equation 1
$y = 3x - 1$ Equation 2
$2x + 5 = 3x - 1$
$6 = x$
The solution is $(6, 17)$.

$y = 2(6) + 5$
$y = 17$

Pg 83

Solve by Substitution

#1 in book + Paper

#2 in book

$x - 3y = -1$

$x = y$

$|x - 3x| = -1$

$-2x = -1$

$x = \frac{-1}{-2}$

$x = \frac{1}{2}$

$x = y$

$\frac{1}{2} = y$

#3

$2x + y = 3$

$x - 3y = 5$

Step 1

$y = 3 - 2x$

Step 2 Substitute

$x - 3y = 5$

$x - 3(3 - 2x) = 5$

$x - 9 + 6x = 5$ Step 3 Distribute

$+9 \quad +9$

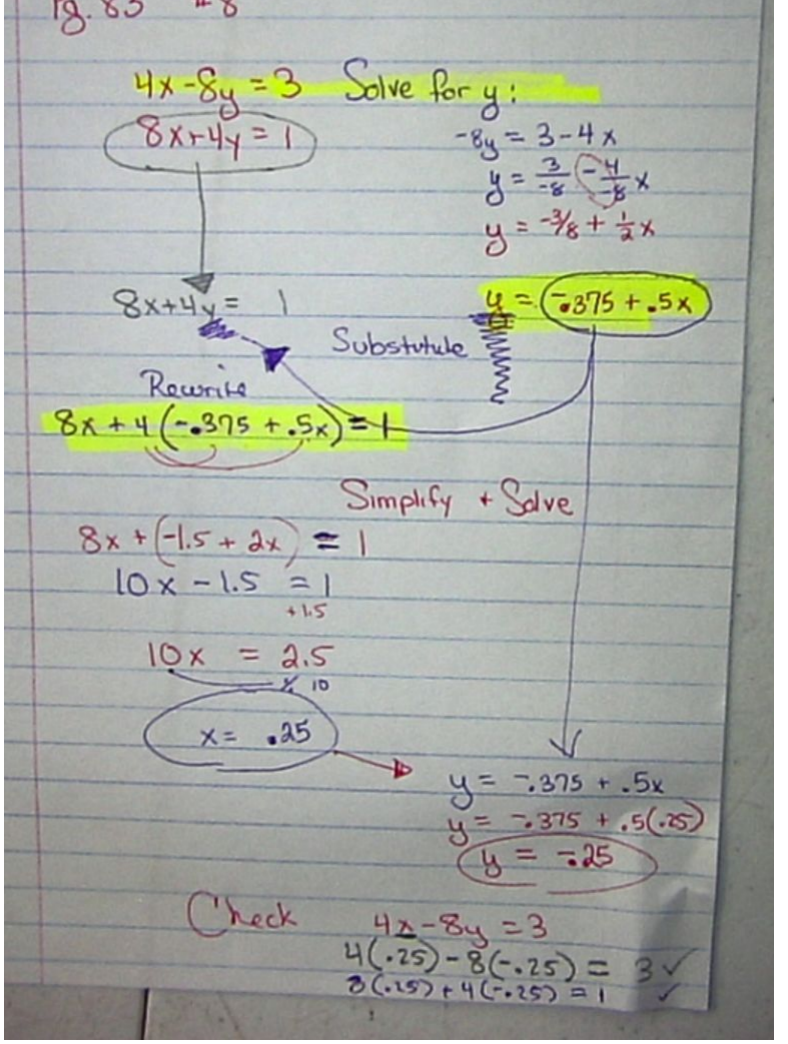
Combine Terms

$x + 6x = 14$

$7x = 14$

$x = \frac{14}{7} = 2$

Finish ~~Monday~~ Tues 11/12


#8
4x - 8y = 3
8x + 4y = 1
Solve for y:
-8y = 3 - 4x
y = 3/-8 - (-4/-8)x
y = -3/8 + 1/2 x
8x + 4y = 1
y = -.375 + .5x
Substitute
Rewrite
8x + 4(-.375 + .5x) = 1
Simplify + Solve
8x + (-1.5 + 2x) = 1
10x - 1.5 = 1
+1.5
10x = 2.5
/10
x = .25
y = -.375 + .5x
y = -.375 + .5(.25)
y = -.25
Check
4x - 8y = 3
4(.25) - 8(-.25) = 3 ✓
8(.25) + 4(-.25) = 1 ✓

Application --- Scenario with 2 constraints and 2 variables

A comedy club earns \$1088 from an opening night performance and \$1183 from a second performance. On opening night, the club sells 68 adult tickets and 136 student tickets. For the second performance, the club sells 79 adult tickets and 140 student tickets. What is the price of each type of ticket?

System

$68x + 136y = 1088$ Equation 1 (first performance)

$79x + 140y = 1183$ Equation 2 (second performance)

► The solution is $(7, 4.5)$. So, an adult ticket costs \$7 and a student ticket costs \$4.50.