Algebra/Geometry Institute Summer 2004

Lesson Plan 3
Faculty Name: Eddie L. Childs, Sr.
School: John F. Kennedy Memorial High School
City: Mound Bayou, MS
Grade Level: Grade 9 Algebra I

1. Teacher objective(s):

- The students will solve equations with the variable on both sides.

2. Instructional Activities:

- The teacher will state the lesson objective and write an example on the board, such as $4x - 9 = 7x + 12$, in colored markers – use different colors for the left side, the right side and the equal signs.
- The teacher will separate the class into four groups. Each group will list the first two steps they will take to solve the equation.
- The students will discuss the steps, including the proper order they will use to solve the equation.
- The students will draw flowcharts of the steps needed to solve multi-step equations, plus they will include the steps they took to check the equation.
- Each group will be asked to explain the difference between an equation whose solution set is empty and an equation that is an identity.
- The students will model and solve the equations: $x - 3 = 2x - 1$. The students will model the equation by placing one cup and three negative counters on one side of the mat. Students will place two cups and one negative on the other side of the mat. They will remove one negative counter from each side of the mat. Next, students will remove the same number of cups from each side of the mat. Whereas, in this case students will remove one cup from each side. The cup on the right is matched with 2 negative counters. Therefore $x = -2$.
- The students will work in groups to complete the activity. The teacher will walk around the rooms as students model the problems. The students will check their answers by substituting the values into the original equations.
- The students will write in their journal describing the steps they will use to solve $12x + 15 = 35 + 2x$.
- Assign the homework just before the end of the class period. This will include homework sheets; see the attachment sheet on the back.
- Students whose class work and /or homework that indicate additional help is required, will be assigned reteaching worksheet; see the attachment sheet on the back.

3. Materials and Resources

- Glencoe's *Algebra I: Integration Applications Connections* textbook.
- Homework sheets, see the attachment on the back.
- Reteaching worksheet, see the attachment on the back.
- White board.
- Dry erase markers in several colors.
- Styrofoam cups.
- Counters.

4. Assessment

- Observation.
- Classroom work on practice.
- Homework pg. 171 exercises 14 – 25.
- Journal entry.
- Biweekly test.

Name: _____Class: _____ Date: _____

Homework

Solve each equation:

a. $5x - 3 = 15 - 4x$

b. $2x + 1 = 7 - 10x$

c. $6x + 12 = 5x - 9$

d. $2x + 6 = 5x - 15$

e. $7x = 2x - 6$

f. $5x + 15 = 10x - 30$

g. $-4x - 3 = x + 7$

h. $3x - 8 = 2x + 2$

Name: _____Class: _____ Date: _____

Reteach

Solve each equation:

a. $2y + 9 = 5y + 15$

b. $2x + 3x - 21 = 2x + 42$

c. $7 - 6x = 2x - 9$

d. $3y - 8 = 5y - 20$

e. $2y + 7 = 5y - 9$

f. $5x + 3 = 2x + 18$

g. $\frac{2}{5}x + \frac{6}{5}x = x - 3$

h. $4 - 3y = 16 - y$