Week 11 Algebra 1 Assignment:

Day 1: pp. 207-208 #1-19 odd, 26-32
Day 2: pp. 210-211 #2-12 even, 16-25
Day 3: pp. 214-215 #1-29 odd, 31-39
Day 4: Chapter 5 test
Day 5: pp. 222-223 #1-32, 35-39

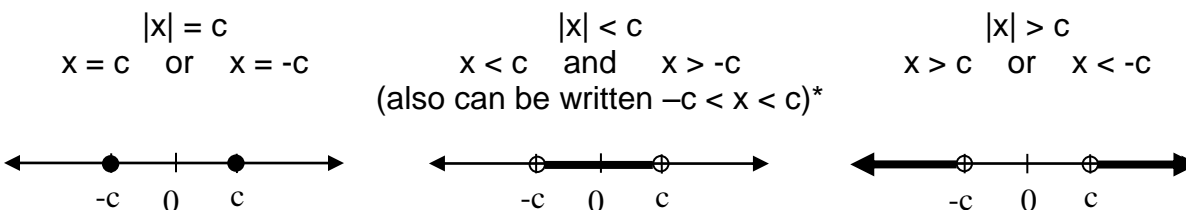## Notes on Assignment:

Pages 207-208:

Work to show:
    #1-19: Write these down using the flip-n-switch, solve if needed, graph using a
        number line, and write the solution based on the graph.
    #26-31: Answers only
    #32: This is a 5-step word problem.

Notes for this section: When solving absolute value inequalities, remember the "flip-n-
    switch." In general, here are the 3 possibilities and how they are dealt with
    (assume c is positive):

$\|x\| = c$	$\|x\| < c$	$\|x\| > c$
$x = c$ or $x = -c$	$x < c$ and $x > -c$	$x > c$ or $x < -c$
	(also can be written $-c < x < c$)*	

        Remember: < goes to "and"
                    > goes to "or"

For the flip-n-switch, write the inequality down once as it appears in the original
problem, write the connecting word, and then write the inequality again, but flip
the inequality symbol and switch the sign on the number.

*__Note on the "sandwich" notation –c < x < c__. This is only use for conjunctions
("and") which give you a segment. Make sure the inequality symbols both face
the same direction, and that if you cover up the middle, the inequality is true for
the endpoints.

#1-19: Graph these after you split them into 2 inequalities.

#3: Since this has the equal bar under the inequality, the graph would have a filled in circle. When you write the answer you can either write -5 ≤ x ≤ 5, or you can do the flip-n-switch and write x ≤ 5 and x ≥ -5.

#5-19: You have some "stuff" in your absolute value brackets. Do these the same way with the flip-n-switch as you would if you just had an x. Do not alter the "stuff." Only do the flip-n-switch.

#17: If you do the flip-n-switch, you get 3x+2 ≤ 6 and 3x+2 ≥ -6. Now solve both inequalities and graph to find your solution. The alternative way to do this is to write it as a double inequality (which you can only do for | | < #). Write the inequality -6 ≤ 3x+2 ≤ 6. To solve this, think of it as an inequality with 3 "sides." Solve for x in the middle, but remember that what you do in the middle, you must do to both of the outside parts.

#19: Combine the like terms inside the | | first.

Pages 210-211:

Work to show:
       #2-12: These are 5-step word problems.
       #16-21: Show work in solving the equations.
       #22-25: Show work in solving the equations and also the graph.

#4: This problem is not asking for a number, it is asking for the largest integer that fits the inequality that you end up with.

#6: This is a bucket problem, but one of the buckets has 2,300,000 in it, as this is the earnings that he earned in some investment. So that bucket does not have anything to multiply in it. The other bucket has the amount x and the interest rate of 8%. Those 2 buckets must add to be ≥ 2,500,000. (The symbol on the solution key is = in the bucket equation, but should be ≥)

#8: If the difference between the numbers is 21, then one number is 21 more than the other number. Use that for your let statements.

#10: After writing your let statements, your equation will have to do with the sum of the calories. The calories in the skim milk will be 2 times however many calories are in an ounce of skim milk, since you are told you have 2 ounces. The calories in the whole milk will be 4 times however many calories are in an ounce of whole milk, since you have 4 ounces.

#18: Clear the fractions by multiplying through by the LCM.

#21: Remember that this becomes 2 equations.

#25: Clear the fractions by multiplying through by the LCM.

Pages 214-15:

Chapter Review – no notes.

Chapter 5 test:

For the test you must be able to:

- Graph inequalities.
- Write the inequality if given the graph.
- Solve inequalities. (Remember to reverse the inequality when multiplying or dividing by a negative number.)
- Graph compound inequalities. (and = "intersection" and or = "union")
- Solve and graph compound inequalities
- Solve absolute value inequalities (remember the flip-n-switch)
- Solve word problems that involve inequalities.

Pages 222-223:

#3-12: Remember that the first coordinate is the x-coordinate. It tells us how far right or left from zero to go. The 2nd coordinate is the y-coordinate. It tells us how far up or down from zero to go.

#13-22: You can do all of these on one graph. Either draw a coordinate system on your notebook paper, or download some from the CHAT math website (www.mcg.net/nelson/chatmath.htm).

#31: The abscissa is another name for the x-coordinate. The ordinate is another name for the y-coordinate.