Week 16 Algebra 1 Assignment:

Day 1: pp. 311-312 #1-17 odd
Day 2: pp. 316-317 #2-14 even, 18-22
Day 3: pp. 320-321 #1-23 odd, 26-31, 34, 36
Day 4: Chapter 7 test
Day 5: p. 326 #1-15, 21-25

Notes on Assignment:

Pages 311-312:

Work to show:
>   All problems: These are all mixture problems. Some will deal with concentrations and some will deal with making mixes of various items. Here is a review of the 5-steps for mixture problems:
>
>   1. **Find:** Write down what you are trying to find.
>   2. **Buckets:** Draw buckets to represent each quantity being mixed. In the bottom of the bucket, put how much of the quantity you have. In the top of the bucket, put either the % concentration or the price per pound.
>   3. **Equations:** If you use 2 variables, you will need a system of 2 equations. One of the equation comes from multiplying the buckets. The other will most likely come from the bottom of your buckets (how much of each quantity you have).
>   4. **Solution:** When you finish solving the system of equations, circle your solutions.
>   5. **Conclusion:** Write a sentence answering what you were told to find.

#3: Notice that it does not give you a price per pound for the last bucket, but gives you the total value of the 5-pound mixture. Since the buckets represent value, you can just put the total value in the last bucket. You do not need to put a 5 in the bottom or figure out the price per pound. Just put the $7.50 in the last bucket. Also, instead of using dollars, you may want to change everything to cents for easier numbers to work with.

#5: This one, like #3, gives you the total value for the last bucket.

#9: Your first bucket should show 60% aggregate. If you add pure aggregate, the pure aggregate will be 100% aggregate for your 2nd bucket.

#11: The wording on this might be confusing. You are starting with a 40% alcohol solution and adding water to it until you end up with a 12.5% alcohol solution.

For the 2nd bucket (the one with water) consider this question: What is the alcohol concentration in water?

#13: You need a bucket for the 12th district and the 13th district. Put an x in the bottom of the district 12 bucket and y in the bottom of the district 13 bucket. When you solve for x and y, you will be solving for the *total* number of voters in each district. You are being asked to find *how many voted for Johnson*. So, once you find x, you will need to find 85% of that number to know how many voted for Johnson. Do the same for the 13th district bucket.

#15-17: You need to round your answers to the nearest tenth. You can use a calculator if you wish.

Pages 316-317:

Work to show:
> #1-11: When solving a system of equations, show these steps:
>> 1. Put an arrow beside each inequality and write down the border equation (take out the inequality and put in an = sign.)
>> 2. Write down whether each border equation is dotted or solid.
>> 3. Write each border equation in slope-intercept form.
>> 4. Graph the first border equation.
>> 5. Test a point in the original inequality for that border to see which side to shade. (Shade the True side and not the False side.)
>> 6. Graph the 2nd border equation.
>> 7. Test a point in the original inequality for that border to see which side to shade. (Shade the True side and not the False side.)
>> 8. The part of the graph that is shaded by both inequalities is your solution.
>
> #12-14: Show work of testing the point in each inequality.
> #18-22: Show work for finding equations.

#12-14: To see if a point is a solution to a system, check it in all of the inequalities of the system and see if it checks. If it does, then it is a solution.

#18-20: Remember to start out with $y = mx + b$. First fill in the slope (m). If you don't know the slope, then find it. Then plug in a point to solve for b.

#21: Remember that a vertical line will be of the form $x = \#$.

#22: If it is to be parallel, it must have the same slope as the line you are given. Use that slope and the point to find b in the equation $y = mx + b$.

Pages 320-321:

Chapter review – no notes.

Chapter 7 test:

- For the test, you will need to be able to:
- Test to see if a point is a solution for a system.
- Solve systems of equations by:
    - Graphing
    - Substitution
    - Addition
- Solve systems of inequalities by graphing.
- Tell whether a system is Inconsistent, Consistent and Dependent, or Consistent and Independent. (Write the equations in slope-intercept form to get an idea of what the lines look like.)
- Know how to tell when solving a system whether the lines are parallel, the same line, or intersect at a single point.
- Solve 2 word problems using 2 variables.

Page 326:

#1-10: Remember that the degree of a term is the sum of the exponents on the variables. The degree of the entire polynomial is the same as the highest degree of all the individual terms.

#11-15: Remember the order of operations:
    1. Grouping symbols

2. Exponents
3. Multiply or divide
4. Add or subtract.