Week 5 Algebra 2 Assignment:

Day 1: Chapter 2 test
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Notes on Assignment:

Chapter 2 Test:

What to know for the test:

- Given a number, tell which set it belongs to.
- Given some expressions, inequalities, or equations, tell what properties are being illustrated. (The properties are listed in sections 2.1 and 2.2.)
- Match the equation or inequality to each graph.
- Know the formula for finding the distance between 2 points on a number line.
- Solve equations and inequalities.
- Solve equations involving absolute value.
    - < goes to "and" (This is also the "sandwich" inequality.)
    - > goes to "or"
    - Do the flip-n-switch
- Simplify double inequalities
    - "or" means "union"
    - "and means "intersection" (i.e. overlap)
- Use the distance formula, d = rt.
- Three word problems, each worth 5 steps. Steps must be numbered.

Page 89-91:

Work to show:

#1-5: Put all points on a single graph.
#6-10: Answers only
#11-14: Use a separate graph for each problem.
#15-18: Answers only
#19-22: Circle maps
#23-25: Answers only
#32-36: Show work as needed

#1-10: The first coordinate is the x-coordinate (left/right distance) and the 2nd is the y-coordinate (up/down distance).

#11-14: Graph each of these on a separate graph. You can download graph paper from the CHAT math website if you want.

#15-18: Write the list of ordered pairs enclosed in { }. This is set notation.

#19-22: The x-coordinates go in the domain circle (the one on the left) and the y-coordinates go in the range circle (the one on the right).

#23-25: The domain is the set of all x-values. The range is the set of all y-values. List these as two sets, using { }.

Pages 95-97:

Work to show:

#1-9: Answers and explanations
#11-15: 3 answers for each problem, given in function notation
#17-19: Separate graph for each problem
#21-27: Answers as directed
#30-34: If there is more than one level of factoring show all levels.

#1-9: Remember the 3 function tests:

1. Check the ordered pairs for x-coordinates that repeat.
2. Vertical line test (no vertical line should cross more than once for functions.)
3. Function machine (if you know exactly which single value comes out to the machine, it is a function.)

#11: You are asked to find f(0), f(-3) and f(8).

#17: Graph the y-intercept (0, 6) first. From there, use your slope of -2/1 to "fall" 2 units and run 1 unit. That will be your second point. Using the 2 points, graph the line, putting arrows on both ends to show it goes on forever. (Note: Since the slope is negative, your line should be falling from the left to the right.)

#19: The x has no number in front of it, so put a 1. Since there is a negative in front of the x, that means you have a -1 there. Think of the slope as -1/1 so you can get a rise and run.

#21: The independent variable is the one that you get to choose. The dependent variable depends on what you choose for the other variable.

#23: Use the given function *h*(r) = 5r for this problem.

#25: To find *h(*2x*),* put 2x in the function into the function *h*. Instead of 5 times *r*, you have 5 times the "stuff".

#27: Does it pass the vertical line test?

#30-34: Two of these will have to be done by grouping.

Pages 104-105:

Work to show:

#1: Show calculation as needed.
#3-9: Write down the formula for slope with your numbers substituted in. Calculate.
#11-19: Show the work for changing to slope-intercept form and then graph each on a separate graph. Label the line with its equation.
#21-26: Answers as directed.
#30-33: Answer as directed.

#1: Solve the equation for y, and then replace the y with f(x) so that it is in function notation.

#3-9: Slope = $\frac{\Delta y}{\Delta x} = \frac{y_1 - y_2}{x_1 - x_2}$. Make sure that whatever point you start with for subtracting the y's, you start with the same point for subtracting the x's.

#3: Be careful when subtracting a negative. It becomes addition.

#11-19: Solve for y to put in slope-intercept form. In the form y = mx + b, the b is the y-intercept. Graph it first. The m is the slope. If it is not a fraction, write it as one. Then it will be of the form rise/run. From the y-intercept, do your rise and run to get a 2nd point for your line. Draw your line. A negative rise is actually a "fall."

#23: You should see that the y-intercept is *r*. Use that for your slope intercept form. Then take that slope intercept form and manipulate it to be in standard form, ax + by = c.

#33: One ordered pair expressed in function notation would be *f*(1) = 2. You use another ordered pair.

Pages 108-110:

Work to show:

#1-13: Show work.
#15-19: Show work as needed.
#21-30: Show work. If told to draw a graph, use a separate graphs for each.

#1-5: For standard form, get the x-term and y-term on the left, and the constant on the right. List the x-term first. If the x-term is negative, multiply the entire equation through by -1.

#7-13: For the equation, you always need the slope first. If it is not given, find it. Then use the slope and the point in the equation $y = mx + b$ to find the value of b for your equation. If you have 2 points, it does not matter which one you pick.

#15-19: Find the slope using the 2 points and do as you did for the problems above. If you want to count the boxes on the graph to come up with your rise and run, you can.

#21-28: You will be discovering some key concepts by doing these problems. Make sure you understand them.

#29-30: Use your answer form #28 to figure out the slope of the perpendicular line. Then using that slope and one of the points, come up with the equation.