Week 13 Algebra 1 Assignment:

Day 1: p. 254 #1-19 odd, 23-27
Day 2: pp.257-258 #1-19 odd, 24-28
Day 3: pp. 261-262 #2-22 even, 26-30
Day 4: p. 265 #1-11 odd, 12-18, 21-25
Day 5: pp. 257-258 #14-20 even, 21-23, p. 269 #22-28 even

Notes on Assignment:

Page 254:

Work to show:

#1-9: Answers only
#11-19: Show $y=mx+b$ with the slope filled in, then put in the point, solve for b, and write the equation. (See notes below.)
#23-27: Show work needed.

#1-9: You are given the slope and y-intercept so put them directly in for m and b in the slope intercept form $y = mx + b$.

#11-19: When finding the equation of a line, given the slope and a point, always start with $y = mx + b$.

- Put the slope in for m.
- Since your point has to work in the equation, put it into your equation for x and y.
- Solve the equation for b.
- Put your values for m and b into the slope-intercept form and you are done.

#27: To find the x-intercept, let $y = 0$ and solve for x. To find the y-intercept, let $x = 0$ and solve for y.

Pages 257-258:

Work to show:

#1-20: Calculate the slope, show $y=mx+b$ with the slope filled in, then put in a point, solve for b, and write the equation. (See notes below.)
#21-23: Show work needed to answer questions.
#24-28: Write the equations only. Do not solve.

#1-11: When finding the equation of a line, given 2 points, always start with $y = mx + b$.

- Use the 2 points to find the slope.
- Put the slope in for m.
- Since both of your points must work in the equation, pick either one and put it into your equation for x and y.
- Solve the equation for b.
- Put your values for m and b into the slope-intercept form and you are done.

#13-20: Look at the information that you are given. You always need the slope, so if it's not given you must find it. After that, the process is the same whether you are given one point or 2 points.

#24-28: These are not 5-step word problems. Use x for the variable and write an equation.

Pages 261-262:

Work to show:

#2-4: Graphs
#6: Answer only
#8-10: Translate the direct variation, solve for k, and write the equation.
12-22: Translate the direct variation, solve for k, and write the equation. Solve for the given value.
#26-30: Answers as directed

Notes for this section: When you see the words "varies directly as" you should always translate it as " = k ".

#2-4: What do you do for all of these x-values to get the y-value? Write it as an equation and then graph it.

#8-10: If "y varies directly as x", then we have "y = kx". Put your given values for x and y into this equation and solve for k. Write your equation, putting in your value for k. This is the equation for the variation. Remember that k is a constant, not a variable. It will remain as part of your equation. You can put other numbers in for x and y, but k will not change.

#12: Find your value of k and your equation for the variation like you did for #8 and #10. Once you have your equation, you can put the given value of x (which is 7) in for x in your equation to find the y that goes with it.

#16-20: Here are the questions:

- Is it a relation? (Does it represent a set of ordered pairs?)
- Is it a function? (Is each x paired with a unique y?)
- Is it linear? (Will it graph to be a straight line?)
- Is it a direct variation? (Is it of the form y = kx?)

#22: Write down the direct variation using f for force and d for distance. Find k and your equation for the variation. Fill in the amount given for the distance of 5 and find the force that must go with it.

Page 265:

Work to show:

#1-9: Graphs. Follow notes below.
#11-12: Answers only
#13-16: Graphs. Follow notes below.
#17-18: Answers only
#21-23: Clear ( ) and simplify
#24-25: Show work when solving.

Notes for this section: When graphing linear inequalities, follow these steps:

1. Write down the inequality as an equation (with an equal sign instead of the inequality sign). This is your boundary line.
2. Write down whether the boundary is dotted or solid. If there is no equal bar under the inequality, then it is dotted. If there is an equal bar under the inequality, then it is solid.
3. Solve the equation for y so that it is in slope-intercept form and easy to graph. If the equation has no y, (i.e. x = #) then it is a vertical line.
4. Graph the boundary line and label it.
5. Test a point on one side of the boundary line in the original inequality. A good point to use is (0,0) (unless the boundary goes through that point.)
6. Shade the "true" side. Do not shade the "false" side.
7. Label the shaded part with your original inequality.

#13-16: These have either vertical or horizontal boundary lines.

#22: Put 1's where there are no coefficients.

Page 269:

Work to show:

#22-24: Show work solving for y, then graph.
#26: Show work as in previous assignments to find equation.