Week 17 Algebra 2 Assignment:

Day 1: pp. 335-336 #1-21 odd
Day 2: p. 338 #1-20
Day 3: pp. 343-345 #1-20 all, 23-27 odd
Day 4: p. 336 #26-30, p. 339 #23-27, p. 345 #30-35
Day 5: pp. 348-349 #2-30 even

Notes on Assignment:

Pages 335-336:

Work to show:
#1-5: Answer as directed.
#7-21: Fill in the numbers as you write down the quadratic formula, then work it out.
#26-30: Graph for each

#1-5: Remember that if the discriminant is negative, you have 2 complex solutions. If it is zero, you have one rational solution. If it is positive you have 2 real solutions, but you can also say whether they are rational or irrational. If the discriminant is a perfect square, then your solutions are rational. If it is not a perfect square, your solutions are irrational.

#7-21: Use the quadratic formula for all of these. If the discriminant is negative, simplify it to an imaginary number.

#17-19: Remember to get all of the terms on one side before you determine a, b, and c.

#29-30: Remember to check a point in the original problem to see which side to shade. Shade the true side.

#21: I suggest you multiply through by 3 first to clear the fraction.

Page 338:

Work to show:
#1-10: One graph
#11: Eight answers
#12-20: Fill in the numbers as you write down the formula, then work it out.
#23-27: Show formulas used for each, then work it out.

#1-10: You can put all of these on the same graph. Make sure to label the horizontal axis as the Real axis and the vertical axis as the imaginary axis.

#12-20: The absolute value of a complex number is its distance from the origin. Use the formula $|ax+bi|=\sqrt{a^2+b^2}$.

#23-27: If you don't remember the formulas for distance and midpoint, refer to section 3.9. If you need the formula for slope (heaven forbid!) it is in section 3.4.

Pages 343-345:

Work to show:

#1-4: One graph
#5-6: Fill in the numbers as you write down the formula, then work it out. Do the same for the slope. Two answers for each.
#7-10: One graph
#11-18: Answers only is ok.
#19-20: Answer as directed.
#23-27: Separate graph for each problem
#30: Answer as directed.
#31-34: Show work to find equations.
#35: 5-step word problem

#1-4: You can draw these all on the same set of axes.

#5-6: Use $|ax+bi|=\sqrt{a^2+b^2}$ to find the length of the vectors. For the direction, Remember that the a tells you the horizontal distance (i.e. the run) and the b tells you the vertical distance (i.e. the rise). The slope will be $\frac{rise}{run}=\frac{b}{a}$. Note that you will have to also write which direction the vector points. For #5, for example, the slope is $\frac{-4}{2}=-2$, which means it slopes downward from left to right. But we still do not know whether the vector points down and to the right, or up and to the left. This depends on which end of the vector is the terminal point (the one with the arrow). Visualize what the vector looks like to decide.

#7-10: You can draw these all on the same set of axes. Remember that the real part tells you how far left or right to go from the initial point and the imaginary part tells you how far up or down to go. If a part is missing, you can a write in a 0 if you want.

#11-12: Subtract the coordinates of the initial point from the coordinates of the terminal point. This will give you the real and imaginary parts of the complex number, respectively.

#19-20: Write the representation of each vector being added. Then write the sum. You do not have to graph these.

#23-27: Do these on graph paper. Draw the first vector starting at the origin. Then starting at the terminal point of that vector, draw the next vector. The sum vector is the vector that starts at the origin and ends where you last drawn vector ends. Write the complex number that the sum vector represents.

#30: Think about how you would write this problem as addition, so that you can use the method of adding the vectors.

#31-34: Lines must always be of the form y = mx +b. Find the slope first. Put it in for m. Then put in a point for x and y to find b.

#33: Perpendicular lines have slopes that are negative reciprocals.

#34: Parallel lines have the equal slopes.

#35: This is a bucket problem. Each bucket represents interest, so the last bucket will have only $68, since that is the total interest. There won't be anything else in the bucket.

Pages 348-349:

Work to show:

#2-4: Show branching.
#6-8: Show work as needed.
#10-12: Show simplifying after multiplying
#14-16: Show rationalization work.
#18-20: Graph and formula to find absolute value
#22-24: Graphs
#26-30: Answer as directed.

Chapter review – no notes