Chapter 3, Section 1: (Main idea: Radians)
        Memorize the conversion factor between degrees and radians ($2\pi = 360^0$) and use it until it becomes second nature to you. You shouldn't need to memorize any other equivalencies – just this main one.
        Sketch all of the six basic trig graphs, labeling the *x*-axis in degrees. Then also label the x-axis in radians. (Maybe use a different colored pencil.) This will help you begin to think about angle measurements flexibly.

3.1: # 5, 11, 13, 21, 27, 29, 35, 37, 45, 47, 49, 50, 57 - 74, 75, 76, 77, 78

Chapter 3, Section 2: (Main idea: Applications)
        The crucial relationship for understanding this section is the definition of one radian as the angle with vertex at the center of the circle that intercepts an arc on the circle equal in length to the radius (p. 94.) Think about that definition and sketch it on a circle.   Use that to figure out the formula for the arc length of a sector of the circle.
        Then ask yourself what the area of the sector of a circle must be and figure it out from the fact that the area of the whole circle is $\pi \cdot r^2$.

3.2: # 3, 5, 9, 13, 20, 21, 27, 31, 35, 39, 41, 47

Chapter 3, Section 3: (Main idea: The Unit Circle)
        Compare this material to Chapter 1, section 3 and notice that these are exactly the same relationships. The only difference here is that the radius is always 1, since we are using a unit circle.

        On Test 2, you'll be expected to have memorized all of the basic trig facts and identities. Use the unit circle and the graphs to understand the relationships well enough to remember these without a formula sheet.
        To remember the domains of trig functions (p. 110) think about the basic graphs, with the *x*-axis labeled in radians. For solving equations like Example 4 on p. 112, recall how we did those in Chapter 2, sections 2 and 3, using graphs and/or reference angles.   Use the same technique here.

3.3: # 7,10,17,22,25,30,35,37,39,45,52,53,56,57, 63, 66, 69, 73

Chapter 3, Section 3 **SUPPLEMENT Algebra with Trig Functions**
        It is important to learn to think of doing algebra on the trig functions. We will do that intensively in Chapters 5 & 6, but while we are thinking of trig identities at the beginning of the course is a good place for a short introduction to this. Look at pages 184-185, Examples 2 & 3. Follow the algebra carefully.

3.3 Supplement. Page 187 (5.1) Problems 45, 46, 47, 49, 50, 51, 55, 59

Chapter 3, Section 4: (Main idea: Linear and Angular Speed)
        If you recall the basic relationship between speed, distance, and time, this section can be easy. For points on a circle, there are two speeds of interest. One is the speed at which the angle changes (angular speed) and the other is the speed at which the arc length changes (linear speed.)
3.4: # 5 ,8,10,15,25,26,29,33,35,37,38,42

Chapter 3 Test:

   You will not be able to use a calculator when you take Test 2. Even though you cannot use a calculator, you could still be asked to solve problems such as the Chapter 3 review, problem 21. On the test, solving this problem would mean identifying the right formula and putting the correct values into the formula, but, of course, you wouldn't have to actually do the tedious computations by hand.   Clearly, however, you won't be asked to solve problems on Test 2 like the Chapter 3 Review, problems 43-54. However, you will need to use this material on Test 4, where a calculator will be allowed and all types of problems may be given, so it is important to learn to use the calculator appropriately as you are going through this chapter.

   You will not be able to use the formula sheet when you take Test 2.   Instead I will give you a version of the formula sheet with blanks instead of the formulas you must memorize. Download a copy of that formula sheet with blanks from the course web page if you wish.

   Follow the same instructions for this Chapter Test as those for the Chapter 1 Test.

Chapter 3 test: Do not use a calculator and omit 17a.   When you do problems 3, 6, and 19, just plug in the values and don't do the computation. When you check your work, use a calculator on the expression you obtained for 3, 6, and 19 to obtain a value to compare with the answer key.

Extra work: As required by your studying – same instructions as for Chapter 1.