

Chapter 8 Test Review

- Everything from quiz
- Know all the reciprocal, negative, co-function and Pythagorean identities from section 8-4. You should know the reciprocal ones already, the negative ones make sense if you picture the unit circle, and you only have to remember the first Pythagorean relationship since you can figure out the other two. You need to study which functions go together for the co-function relationships.
- Remember not to give up on simplifying expressions or proving identities until you have tried the three methods:
 - put everything in terms of sine and cosine,
 - substitute using the identities from 8-4 and
 - get common denominators (or put numerator terms separately over the denominator, depending on which side you are working on).
- When solving trig equations remember:
 - Your calculator gives you one answer. Think about the signs and quadrants of the unit circle to find another.
 - Once you solve for x , keep adding the period to get all the answers between 0° and 360° .
 - If you take the square root of both sides, don't forget the plus or minus.
 - Be prepared for "quadratic-like" equations. They may factor or you may have to use the quadratic formula. If you use the quadratic formula, remember the answer you get is not x . It is sine or cosine of x . More work must be done.
 - Sometimes you need to get the equation in terms of only one trig function and sometimes you don't. If you do, use the identities to make substitutions.
 - NEVER divide by a trig function so that it cancels from both sides and DISAPPEARS from the equation. Dividing in order to get a trig function out of the denominator and put it on the other side is okay.
 - If the original trig equation has a trig function in the denominator, remember to check your answers to make sure none of them make the original answer undefined. This doesn't happen often, but if you're going for the perfect score, you need to remember this.
 - Sometimes you have four terms and must factor by grouping. Make sure you are comfortable with this.