**Chapter 6 Review**

* Memorize the identities that you need to memorize and know how to use the other identities.
* Review the quiz from Wednesday.
* Be able to multiply and factor trig expressions.
* Be able to prove identities.
* Be able to use information about triangles to find certain identities.
* Be able to use the reduction formula to graph an equation.
* Be able to solve trigonometric equations for all solutions and for solutions between 0 and 2.
* Problems to try: pg 496: 1-12, 47, 51, 53, 57, 69, 71, 73, 83, 87

Simplify each expression.

1. 2. 3.

4. 5. 6.

7. 8. 9.

10. 11. 12.

Prove that each of the following equations is an identity.

47. 51. 53.

57.

Find all real numbers that satisfy each equation.

69. 71.

73.

Find all angles in that satisfy each equation.

83. 87.

**Sec 8.1**: Systems of Linear Equations in Two Variables

* Be able to solve a system of equations using substitution or elimination.
* Be able to identify the solution as independent, inconsistent (no solution), or dependent by solving or not solving the equations.

*Problems to try*

1. Solve each system of equations. Determine whether each system is independent, inconsistent, or dependent:

**Sec 8.2**: Systems of Linear Equations in Three Variables

* Be able to solve a system of equations using substitution or elimination.
* Be able to identify the solution as independent, inconsistent (no solution), or dependent by solving or not solving the equations.

*Problems to try*

1. Solve each system of equations. Determine whether each system is independent, inconsistent, or dependent:

**Sec 8.3**: Nonlinear Systems of Equations

* Solve for the solutions of nonlinear systems of equations. Remember to find all of the solutions.
* Solve each nonlinear system of equations. Find real solutions only.

19. 21.

**Sec 8.4**: Partial Fractions

* Be able to set-up to solve for the partial fractions. Remember that if there are repeated factors then must account for them all. Also, remember that if it is an un-factorable quadratic in the denominator then there must be a linear equation in the numerator.
* Be able to solve and find the partial fraction decomposition.

Find the partial fraction decomposition for each rational expression.

23. 25. 26.