Review Section 5.1-5.3

Know all Pythagorean, Reciprocal, and Quotient Identities

You do not need to memorize sum and difference Identities

The test has four types of problems.

1) Solve Trig equations 2) Simplify Trig Expressions

3) Verify (Prove) Trig Identities 4) Find exact values using sum and difference identities

Algebraically you must be able to FACTOR (GCF and Quadratic form), find a COMMON DENOMINATOR when adding/subtracting fractions, MULT/DIV fractions, simplify COMPLEX FRACTIONS, SOLVE by factoring and taking square roots, work with RADICALS, and know WHEN a ratio can "cancel" or simplify to 1.

Here are some practice problems. You should also revisit ALL problems we have done in BOTH notes and HW since we started Chapter 5. Happy Reviewing! Good Luck!

15. Simplify $\csc x - \cos^2 x \csc x$.

Verify that each equation is an identity.

16. $\cos^2 x + \tan^2 x \cos^2 x = 1$

17. $\dfrac{1 - \cos\theta}{1 + \cos\theta} = (\csc\theta - \cot\theta)^2$

18. $\dfrac{\sec\theta + 1}{\tan\theta} = \dfrac{\tan\theta}{\sec\theta - 1}$

19. $\dfrac{\sin^4 x - \cos^4 x}{\sin^2 x} = 1 - \cot^2 x$

Use sum or difference identities to find the exact value of each trigonometric function.

20. $\cos 195°$

21. $\cos 15°$

22. $\sin\left(-\dfrac{17\pi}{12}\right)$

23. $\tan\dfrac{11\pi}{12}$

Solve the following equations

37. $\sin x \tan x - \dfrac{\sqrt{2}}{2}\tan x = 0$

39. $\cos^2 x = 2 - \cos x$