§5.2: Verifying Identities
"I WILL…
…use identities to verifying values."

I. Steps

A. Work at one side ONLY. Generally speaking, focus on the more complicated side first
B. Identify any opportunities to factor an expression, such as adding fractions, squaring a binomial, etc…
C. Apply whatever sine and cosine functions are applicable
D. Simplify the equation by using all applicable theorems and identities
E. CANCEL, CANCEL, CANCEL
F. At its conclusion, left equals to the right
G. Remember, there is <u>MORE THAN ONE WAY</u> to solve an equation

Ex 1: Verify the identity $\frac{\sec^2\theta-1}{\sec^2\theta} = \sin^2\theta$	Ex 2: Verify the identity $\frac{1}{1-sin\,\alpha} + \frac{1}{1+sin\,\alpha} = 2sec^2\alpha$
Your Turn: Verify the identity $-\tan^2 x = (\tan^2 x + 1)(\cos^2 x - 1)$	Ex 4: Verify the identity $\frac{\sin^2 x}{\cos x} + \cos x = \sec x$

Ex 5: Verify the identity $\csc x - \sin x = \cos x \cot x$	Your Turn: Verify the identity $\tan x + \cot x = \sec x \csc x$
Ex 6: Verify the identity $\sin x(\csc x - \sin x) = \cos^2 x$	Your Turn: Verify the identity $\csc x = \sin x + \cos x \cot x$

Assignment: Page 362: 9-39 odd, 43, 45 (omit 21)