

Verifying Trig Identities (Day 2)

- $(\sec^2 \theta - 1) \cos^2 \theta = \sin^2 \theta$
- $\sec^2 \theta (1 - \cos^2 \theta) = \tan^2 \theta$
- $\sin \theta - \sin \theta \cos^2 \theta = \sin^3 \theta$
- $\csc \theta - \cos \theta \cot \theta = \sin \theta$
- $\cot^2 \theta \csc^2 \theta - \cot^2 \theta = \cot^4 \theta$
- $\tan \theta \csc^2 \theta - \tan \theta = \cot \theta$
- $\frac{\sec \theta}{\sin \theta} - \frac{\sin \theta}{\cos \theta} = \cot \theta$
- $\frac{\sin \theta}{1 - \cos \theta} + \frac{1 - \cos \theta}{\sin \theta} = 2 \csc \theta$
- $\frac{\cos \theta}{1 + \sin \theta} + \tan \theta = \sec \theta$
- $\frac{\sin \theta}{1 - \cot \theta} + \frac{\cos \theta}{1 - \tan \theta} = \sin \theta + \cos \theta$
- $\frac{1}{1 - \tan^2 \theta} + \frac{1}{1 - \cot^2 \theta} = 1$
- $\frac{1}{\csc \theta + 1} + \frac{1}{\csc \theta - 1} = 2 \sec^2 \theta \sin \theta$
- $(\csc \theta - \cot \theta)(\csc \theta + \cot \theta) = 1$
- $\cos^4 \theta - \sin^4 \theta = \cos^2 \theta - \sin^2 \theta$
- $\frac{1}{1 - \sin \theta} + \frac{1}{1 + \sin \theta} = 2 \sec^2 \theta$
- $\frac{\cos \theta}{1 + \sin \theta} + \frac{\cos \theta}{1 - \sin \theta} = 2 \sec \theta$
- $\csc^4 \theta - \cot^4 \theta = 2 \cot^2 \theta + 1$