

**MCR3UI Unit 5 Skill Reflection #6 PLEASE DO NOT WRITE ON THIS PAPER.  
RECORD ALL ANSWERS ON SCRAP PAPER.**

Prove each of the following identities.

a)  $\sin\theta\csc\theta - \cos\theta\sec\theta = 0$       b)  $\tan^2\theta = \sec^2\theta \div \csc^2\theta$       c)  $\frac{\tan\theta}{\sec\theta} = \sin\theta$   
d)  $1 + \sin^2\theta = 2 - \cos^2\theta$       e)  $\tan^2\theta + \sec^2\theta = \frac{1 + \sin^2\theta}{\cos^2\theta}$       f)  $\frac{1 + \sin\theta}{\sec\theta} = \frac{\cos^3\theta}{1 - \sin\theta}$       g)  $\sec^2\theta + \csc^2\theta = \frac{1}{\sin^2\theta\cos^2\theta}$

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