

G11A 4.2 Verifying Trigonometric Identities

**Verify each identity.**

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**5.**  $\cot^2 \theta \csc^2 \theta - \cot^2 \theta = \cot^4 \theta$

**6.**  $\tan \theta \csc^2 \theta - \tan \theta = \cot \theta$

**7.**  $\frac{\sec \theta}{\sin \theta} - \frac{\sin \theta}{\cos \theta} = \cot \theta$

**10.**  $\frac{\sin \theta}{1 - \cot \theta} + \frac{\cos \theta}{1 - \tan \theta} = \sin \theta + \cos \theta$