

Name: _____
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Date _____
Algebra II

Reciprocal and Quotient Identities

For #1-6, express each as a single function

1. $\cos \theta \csc \theta$

2. $\tan \theta \cot \theta$

3. $\cot \theta \sec \theta$

4. $\sec \theta \csc \theta \cos \theta$

5. $\csc \theta \tan \theta \cos \theta$

6. $\csc \theta \cot \theta \sin \theta$

7. $\frac{\cos \theta}{\sec \theta}$

8. $\frac{\csc \theta}{\cot \theta}$

9. $\frac{\tan \theta}{\sin \theta}$

10. $\frac{\cot \theta}{\cos \theta}$

11. Express $\frac{\cot x \sin x}{\sec x}$ as a single trigonometric function, in simplest form, for all values of x for which it is defined.

12. Show that $\sec \theta \sin \theta \cot \theta = 1$ is an identity.

13. The expression $\frac{\cot x}{\csc x}$ is equivalent to

- 1) $\sin x$
- 2) $\cos x$
- 3) $\tan x$
- 4) $\sec x$