

UNIT 6 WORKSHEET 10
USING IDENTITIES TO SIMPLIFY EXPRESSIONS

List the quotient identities.

1. $\tan \theta =$ _____

2. $\cot \theta =$ _____

List the Pythagorean Identities.

3. _____

4. _____

5. _____

Using your trigonometric identities, simplify each of the following.

6. $\sec \theta \cdot \frac{\sin \theta}{\tan \theta}$

7. $\cos \alpha \cdot \tan \alpha$

8. $\sec \theta - \sin \theta \tan \theta$

9. $\sin \beta \tan \beta + \cos \beta$

10. $\cos \theta (\tan^2 \theta + 1)$

11. $\frac{1}{\tan^2 \phi + 1}$

12. $\cot x \cdot \sec x$

13. $\sec^2 \theta (1 - \sin^2 \theta)$

14. $\frac{\cos^2 \theta}{1 - \sin \theta}$

15. $\sin \theta (\csc \theta - \sin \theta)$

16. $\cot^2 \alpha - \csc^2 \alpha$

17. $\tan \beta \cdot \csc \beta$