

GPS Pre-Calculus Review 2
Simplifying/Solving/Multiple Angles

Name _____
Period _____ Date _____

1. Simplify each expression.

1. $\csc \theta - \cos \theta \cot \theta$

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

3. $\tan \alpha (\cot \alpha + \tan \alpha)$

4. $\frac{1 + \sin^2 \theta - \cos^2 \theta}{\sec^2 \theta}$

5. $\frac{-\sec(x)}{\csc(-x)}$

6. $\csc^2 \theta - \sin^2 \theta - \cos^2 \theta - \cot^2 \theta$

II. Solve each equation on the interval $[0, 2\pi)$.

7. $9 \tan^2 \theta - 1 = 6 \tan^2 \theta$

8. $\sin^2 \theta - 1 = 0$

9. $5 \csc x + 10 = 0$

10. $\sin \alpha \cos \alpha = \sin \alpha$

11. $4 \cos^2 x + 2 = 3$

12. $5 - 4 \cos^2 \theta = 4 \sin \theta$

13. $\sec x - 2 \tan x = 0$

14. $\frac{1}{\sec \theta - 1} - \frac{1}{\sec \theta + 1} = 2$

15. $3 \tan \frac{\theta}{2} + 3 = 0$