

Name \_\_\_\_\_ hour \_\_\_\_\_

***Honors Accelerated Pre-Calculus***  
**5.1-5.3 Review/trigonometric Identities-equations**

**Simplify the following:**

1.  $\sin x \cdot \tan x \cdot \sec x$

2.  $(1 - \sin x)(1 + \csc x)(\sin x)$

3.  $\frac{\cos^2 x}{1 + \sin x} - (\sec x)(\cos x)$

4.  $\frac{\sin x}{\csc x} + \frac{\cos x}{\sec x}$

5.  $\frac{\tan^2 x}{1 + \tan^2 x} - 1$

6.  $\frac{\tan x}{1 + \sec x} + \frac{1 + \sec x}{\tan x}$

7.  $\frac{\tan x - \sin x \cdot \cos x}{\sin^2 x}$

Name\_\_\_\_\_hour\_\_\_\_\_

| Solve algebraically. $0 \leq x < 2\pi$      |                                           |
|---------------------------------------------|-------------------------------------------|
| 8. $\csc^2 x - 2\cot x = 0$                 | 9. $2 = \sec x + \sec^2 x$                |
| 10. $\sqrt{2} \csc^2 x + \csc x = \sqrt{2}$ | 11. $\sec x + \cos x = \tan x \sin x - 1$ |
| 12. $2\tan^2 x - 3\sec x + 3 = 0$           | 13. $4\sin(2x) = 1$                       |