Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_\_\_

**Verify each identity.**

1. $sinθsecθcotθ=1$ 2. $\frac{sinθ}{cscθ}=sin^{2}θ$

3. $cosθcscθtanθ=1$ 4. $\frac{cscθ}{cotθ}=secθ$

5. $tan^{2}θ+1=sec^{2}θ$ 6. $cosθcotθ+sinθ=cscθ$

7. $sec^{2}θ-tan^{2}θ=1$ 8. $\left(1-sinθ\right)\left(1+sinθ\right)=cos^{2}θ$

**Simplify each trigonometric expression.**

9. $1-sec^{2}θ$ 10. $\frac{secθ}{tanθ}$

**Simplify each trigonometric expression.**

11. $cscθtanθ$ 12. $secθcos^{2}θ$ 13. $csc^{2}θ-cot^{2}θ$

14. $1-sin^{2}θ$ 15. $tanθcotθ$ 16. $cosθcotθ+sinθ$

17. $cosθtanθ$ 18. $\frac{sinθcotθ}{cosθ}$ 19. $secθtanθcscθ$

20. $secθcotθ$ 21. $\frac{tanθcscθ}{secθ}$ 22. $\frac{cotθ}{cscθ}$