AFM HW 7 – SIMPLIFYING TRIG IDENTITIES NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Simplify the following using trig identities. Your final answer should have only one trig function.*

1. $secθcosθ$ 2. $\frac{sin^{2}ϑ+cos^{2}ϑ}{cos^{2}ϑ}$ 3. $cotϑsinϑ$

4. $\frac{sec^{2}ϑ-1}{sec^{2}ϑ}$ 5. $\frac{cscϑ-sinϑ}{cscϑ}$ 6. $cosϑ+tanϑsinϑ$

7. $cosϑsecϑ-\frac{cosϑ}{secϑ}$ 8. $cos^{2}ϑ(sec^{2}ϑ-1)$ 9. $tan^{2}ϑ-tan^{2}ϑsin^{2}ϑ$

10. $\frac{cscϑ}{secϑ}$ 11. $\frac{tan^{2}ϑ}{sec^{2}ϑ}$ 12. $\frac{1}{tan^{2}ϑ+1}$

13. $(secϑ+1)(secϑ-1)$ 14. $cosϑ(1+tan^{2}ϑ)$

15. $\frac{sin^{2}ϑ}{1-cosϑ}$ 16. $sec^{2}ϑ+cot^{2}ϑ-tan^{2}ϑ$

17. $sinϑtanϑcotϑcscϑ$ 18. $\frac{sec^{2}ϑ}{sec^{2}ϑ-1}$

19. $tan ϑcotϑ-cos^{2}ϑ$ 20. $secϑ-sinϑtanϑ$