Honors Algebra 3-4 /Precalculus

5.1 Worksheet

Simplify.

1. $\tan\theta \cdot \csc\theta$

2. $\tan^2\theta \cdot \cos^2\theta$

3. $\sin^2\theta \cdot \cot^2\theta$

4. $\sin\theta \cdot \tan\theta \cdot \cot\theta \cdot \csc\theta$

5. $\dfrac{\sin^2\theta + \cos^2\theta}{\cos^2\theta}$

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

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

8. $\dfrac{1 + \tan^2\theta}{\tan^2\theta}$

9. $\dfrac{\sec^2\theta - 1}{\sec^2\theta}$

10. $\dfrac{\csc\theta}{\sin\theta} - \dfrac{\cot\theta}{\tan\theta}$

11. $\dfrac{\tan^2\theta}{\sec^2\theta} + \dfrac{\cot^2\theta}{\csc^2\theta}$

12. $\sin^2\theta + \cos^2\theta + \tan^2\theta$

13. $\csc^2\theta - \cot^2\theta + \tan^2\theta$

14. $\sin\theta\csc\theta + \tan\theta\cot\theta$

15. $\cos\theta\sec\theta - \dfrac{\cos\theta}{\sec\theta}$

16. $\dfrac{1-\sin^2\theta}{1-\cos^2\theta}$

17. $\tan\theta\cot\theta - \cos^2\theta$

18. $\dfrac{\sin\theta + \tan\theta}{1+\sec\theta}$

19. $\dfrac{\sec\theta - \cos\theta}{\tan^2\theta}$

20. $(1+\cos\theta)(\csc\theta - \cot\theta)$

21. $\dfrac{\cot^2\theta}{\csc\theta + 1} + 1$