

Trigonometry T9B – Practice with graphs and identities

Verify the following identities:

1. $\sec\theta - \tan\theta\sin\theta = \frac{1}{\sec\theta}$

2. $\frac{1+\cos\theta}{\sin\theta} = \csc\theta + \cot\theta$

3. $\frac{\sec\theta}{\cos\theta} - \frac{\tan\theta}{\cot\theta} = 1$

4. $\frac{\sec^2\theta}{\sec^2\theta-1} = \csc^2\theta$

5. $(\sin\theta + \cos\theta)^2 + (\sin\theta - \cos\theta)^2 = 2$

6. $\frac{\cos^2\theta - \sin^2\theta}{1 - \tan^2\theta} = \cos^2\theta$