

Unit 4.5 Double Angle Identities PRACTICE

Verify each identity.

1) $\frac{2}{\csc^2 x} = 1 - \cos 2x$

2) $\frac{\sin 4x}{\sin 2x} = 2\cos 2x$

3) $\sec^2 x - 2\cos^2 x = -\cos 2x + \tan^2 x$

$$4) \cos 2x \tan 2x = 2 \sin x \cos x$$

$$5) \frac{\sin 2x}{2 \cos^2 x} = \frac{1}{\cot x}$$

$$6) \frac{\sin 2x}{1 + \cos 2x} = \frac{1}{\cot x}$$

$$7) \frac{\cot x}{1 + \cos 2x} = \frac{1}{\sin 2x}$$