Example #1

Verify the identity

$$\frac{\sec^2\theta - 1}{\sec^2\theta} = \sin^2\theta$$

$$\frac{\cancel{1} + \tan^2\theta \cancel{-1}}{\sec^2\theta} = \sin^2\theta$$

$$\frac{\tan^2\theta}{\sec^2\theta} = \sin^2\theta$$

$$\tan^2\theta \cdot \frac{1}{\sec^2\theta} = \sin^2\theta$$

$$\frac{\sin^2\theta}{\cancel{\cos^2\theta}} \cdot \cancel{\cos^2\theta} = \sin^2\theta$$

$$\boxed{\sin^2\theta = \sin^2\theta}$$

LIVEWORKSHEETS