

Section 4-3 Activity

Prove that the given equation is an identity.

1.  $\sin^3\theta\cos^2\theta = \sin^3\theta - \sin^5\theta$

2.  $\tan^2\theta\cos^2\theta + \cot^2\theta\sin^2\theta = 1$

3.  $\frac{1-\sin v}{\cos v} + \frac{\cos v}{1-\sin v} = 2 \sec v$

4.  $\sin \theta(\cot \theta + \tan \theta) = \sec \theta$

5.  $(3 + 2 \sin \theta)(3 - 2 \sin \theta) = 4 \cos^2 \theta + 5$

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