

## More Trig Proofs to Do

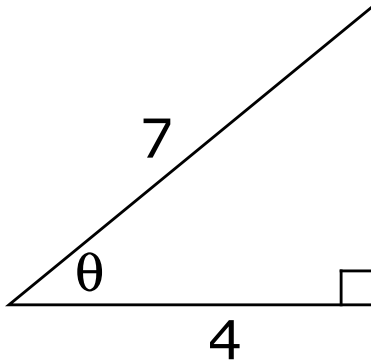
Directions: Here are some more trigonometry proofs, double and half angle problems to do. Try to make one side look like the other side. Do not consult other books. Try to make your work **neat** and **readable**.

1.  $\sec^2 t + \tan^2 t + 1 = 2\sec^2 t$

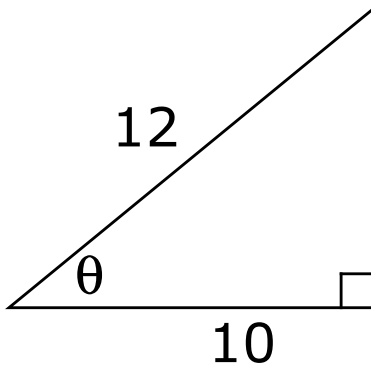
2.  $(\tan A + \cot A)^2 = \sec^2 A \csc^2 A$

3.  $\sin^2 \theta + \frac{1 - \tan^2 \theta}{\sec^2 \theta} = \cos^2 \theta$

4.  $\frac{\cos \theta}{1 + \sin \theta} - \frac{1 - \sin \theta}{\cos \theta} = 0$



Find  $\cos 2\theta$  and  $\cos(\theta/2)$  here. Also find  $\sin 2\theta$  and  $\sin(\theta/2)$ .



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