Name _____

People Search: Trig Identities

Directions: Find a different person to help you complete each of the following problems. Each person should sign the question that they answer. You may answer ONE on your own sheet.

Find Someone Who Can....

Prove $\frac{\cos^2\theta}{\sin\theta}+\sin\theta=\csc\theta$	Prove $\csc\theta=\frac{\cot\theta}{\cos\theta}$
Prove $\csc^2\theta\tan^2\theta-1=\tan^2\theta$	Prove $(1-\tan\theta)^2=\sec^2\theta-2\tan\theta$
Prove $\sec\theta-\tan\theta\sin\theta=\cos\theta$	Prove $\csc\theta+\cot\theta=\frac{1+\cos\theta}{\sin\theta}$
Prove $\tan^2\theta\sin^2\theta=\tan^2\theta-\sin^2\theta$	Prove $\csc^4\theta-\cot^4\theta=\csc^2\theta+\cot^2\theta$

Name _____

People Search: Trig Identities

Directions: Find a different person to help you complete each of the following problems. Each person should sign the question that they answer. You may answer ONE on your own sheet.

Find Someone Who Can....

Prove $\frac{\cos^2\theta}{\sin\theta}+\sin\theta=\csc\theta$ $\frac{\cos^2\theta}{\sin\theta}+\frac{\sin^2\theta}{\sin\theta}$ $=\frac{\cos^2\theta+\sin^2\theta}{\sin\theta}=\frac{1}{\sin\theta}$ $=\csc\theta$	Prove $\csc\theta=\frac{\cot\theta}{\cos\theta}$ $\frac{\cot\theta}{\cos\theta}=\frac{\cos\theta/\sin\theta}{\cos\theta}$ $=\frac{1}{\sin\theta}=\csc\theta$
Prove $\csc^2\theta\tan^2\theta-1=\tan^2\theta$ $\frac{1}{\sin^2\theta}\cdot\frac{\sin^2\theta}{\cos^2\theta}-1$ $\frac{1}{\cos^2\theta}-1=$ $\sec^2\theta-1=$ $\tan^2\theta$	Prove $(1-\tan\theta)^2=\sec^2\theta-2\tan\theta$ $(1-\tan\theta)(1-\tan\theta)$ $1-2\tan\theta+\tan^2\theta=$ $1+\tan^2\theta-2\tan\theta=$ $\sec^2\theta-2\tan\theta$
Prove $\sec\theta-\tan\theta\sin\theta=\cos\theta$ $\frac{1}{\cos\theta}-\frac{\sin\theta}{\cos\theta}\cdot\sin\theta=$ $\frac{1-\sin^2\theta}{\cos\theta}=$ $\frac{\cos^2\theta}{\cos\theta}=\cos\theta$	Prove $\csc\theta+\cot\theta=\frac{1+\cos\theta}{\sin\theta}$ $\frac{1}{\sin\theta}+\frac{\cos\theta}{\sin\theta}$ $=\frac{1+\cos\theta}{\sin\theta}$
Prove $\tan^2\theta\sin^2\theta=\tan^2\theta-\sin^2\theta$ $\tan^2\theta(1-\cos^2\theta)=$ $\tan^2\theta-\tan^2\theta\cos^2\theta=$ $\tan^2\theta-\frac{\sin^2\theta}{\cos^2\theta}\cdot\cos^2\theta$ $\tan^2\theta-\sin^2\theta$	Prove $\csc^4\theta-\cot^4\theta=\csc^2\theta+\cot^2\theta$ $(\csc^2\theta-\cot^2\theta)(\csc^2\theta+\cot^2\theta)$ $1(\csc^2\theta+\cot^2\theta)$ $=(\csc^2\theta+\cot^2\theta)$