**Identity Review** **Name**_____

## More Proofs Practice

**Prove each of the following.**

1) $1+\sin 2\theta = (\sin\theta + \cos\theta)^2$

2) $\cos 2\theta = \dfrac{1-\tan^2\theta}{1+\tan^2\theta}$

3) $\sec^2\theta = \dfrac{2}{1+\cos 2\theta}$

4) $\dfrac{\sin^2\theta+\cos^2\theta}{\sin^2\theta-\cos^2\theta} = -\sec 2\theta$

5) $\dfrac{(\sin\theta+\cos\theta)^2}{\sin 2\theta} = \csc 2\theta + 1$

**Identity Review** **Name**_____

**Use Sum/Difference Identities to find the exact value:**

6. $\sin(195°)$

**Prove each of the following:**

**9.** $\left(\sin\theta+\cos\theta\right)^2+\left(\sin\theta-\cos\theta\right)^2=2$

**10.** $\left(\sin\theta+\cos\theta\right)\left(\tan\theta+\cot\theta\right)=\sec\theta+\csc\theta$

**11.** $\dfrac{\tan\theta-1}{\tan\theta+1}=\dfrac{1-\cot\theta}{1+\cot\theta}$