

Name: _____

Mathematics 1613: Trigonometry Quiz #14

41: Using any identities that we have proven to this point, prove that another valid formula for $\cos 2\theta$ is $2 \cos^2 \theta - 1$. Use this formula to find another for $\cos \frac{\theta}{2}$.

42: Use the above formula for $\cos \frac{\theta}{2}$ to find one for $\sin \frac{\theta}{2}$.

43: Evaluate the following:

$$\cos \frac{\pi}{8}$$

$$\csc \frac{11\pi}{12}$$

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44: Given that $\sin \theta = -\frac{4}{5}$ and $\frac{3\pi}{2} \leq \theta < 2\pi$, find $\sin \frac{\theta}{2}$, $\cos \frac{\theta}{2}$, $\tan \frac{\theta}{2}$.