

Double Angle Identities

$$\sin 2\theta =$$

$$\cos 2\theta =$$

Double-Angle Identities		
$\sin 2\theta = 2 \sin \theta \cos \theta$	$\cos 2\theta = \cos^2 \theta - \sin^2 \theta$ $\cos 2\theta = 2 \cos^2 \theta - 1$ $\cos 2\theta = 1 - 2 \sin^2 \theta$	$\tan 2\theta = \frac{2 \tan \theta}{1 - \tan^2 \theta}$

Example #1:

Prove: $\sin 2\theta = 2 \tan \theta - 2 \tan \theta \sin^2 \theta$

Example #2:

$\cos 2\theta = (2 - \sec^2 \theta)(1 - \sin^2 \theta)$

You try: **$\sin 2x = 2 \cot(x) \sin^2(x)$**