11-1 Double Angle Identities

Name: _____   Time › Start: _____   Finish: _____   Total Time = _____

Remember that
$$\begin{cases} \sin 2\theta = 2\sin\theta \bullet \cos\theta \\ \cos 2\theta = \cos^2\theta - \sin^2\theta \\ \qquad = 2\cos^2\theta - 1 \\ \qquad = 1 - 2\sin^2\theta \end{cases}$$

1. Given that $\cos\theta = \dfrac{\sqrt{5}}{5}$ and that θ is in the first quadrant, find

   A.) $\cos 2\theta$ B.) $\sin 2\theta$

2. Given that $\sin\theta = \dfrac{3}{5}$ and that θ is in the first quadrant, find

   A.) $\cos 2\theta$ B.) $\sin 2\theta$

3. Given that $\tan\theta = \dfrac{5}{12}$ and that θ is in the first quadrant, find

   A.) $\cos 2\theta$ B.) $\sin 2\theta$