

Name: _____

Product-to-Sum Identities

$$\sin \theta \sin \Phi = \frac{\cos (\theta - \Phi) - \cos (\theta + \Phi)}{2}$$

$$\cos \theta \cos \Phi = \frac{\cos (\theta + \Phi) + \cos (\theta - \Phi)}{2}$$

$$\sin \theta \cos \Phi = \frac{\sin (\theta + \Phi) + \sin (\theta - \Phi)}{2}$$

$$\cos \theta \sin \Phi = \frac{\sin (\theta + \Phi) - \sin (\theta - \Phi)}{2}$$