

**Chapter 9, Solution 3.**

$$(a) \quad 10 \sin(\omega t + 30^\circ) = 10 \cos(\omega t + 30^\circ - 90^\circ) = \mathbf{10\cos(\omega t - 60^\circ)}$$

$$(b) \quad -9 \sin(8t) = \mathbf{9\cos(8t + 90^\circ)}$$

$$(c) \quad -20 \sin(\omega t + 45^\circ) = 20 \cos(\omega t + 45^\circ + 90^\circ) = \mathbf{20\cos(\omega t + 135^\circ)}$$

$$\mathbf{(a) \ 10\cos(\omega t - 60^\circ), (b) \ 9\cos(8t + 90^\circ), (c) \ 20\cos(\omega t + 135^\circ)}$$