Chapter 9, Solution 5.

$v_1 = 45 \sin(\omega t + 30°)$ V $= 45 \cos(\omega t + 30° - 90°) = 45 \cos(\omega t - 60°)$ V
$v_2 = 50 \cos(\omega t - 30°)$ V

This indicates that the phase angle between the two signals is **30°** and that $\boldsymbol{v_1}$ **lags** $\boldsymbol{v_2}$.