

Chapter 9, Solution 27.

$$j\omega \mathbf{V} + 50\mathbf{V} + 100 \frac{\mathbf{V}}{j\omega} = 110 \angle -10^\circ, \quad \omega = 377$$

$$\mathbf{V} \left(j377 + 50 - \frac{j100}{377} \right) = 110 \angle -10^\circ$$

$$\mathbf{V} (380.6 \angle 82.45^\circ) = 110 \angle -10^\circ$$

$$\mathbf{V} = 0.289 \angle -92.45^\circ$$

Therefore, $v(t) = 289 \cos(377t - 92.45^\circ) \text{ mV}$.