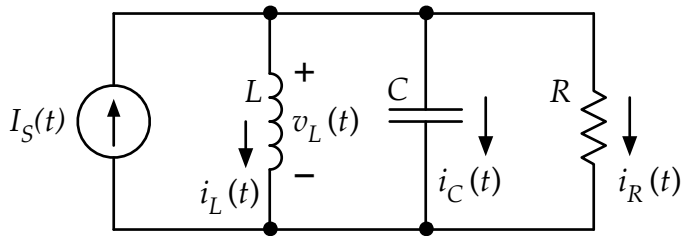


In the parallel RLC circuit shown below, the current through the inductor is known to be

$i_L(t) = I_m \cos(\omega t)$, where I_m is the amplitude of the sinusoid, and ω is the angular frequency.

Determine expressions for $i_R(t)$ and $i_C(t)$.



$$i_R(t) = \underline{\hspace{15cm}}$$

$$i_C(t) = \underline{\hspace{15cm}}$$

Hint: Determine the expression for the voltage across the inductor. Use the inductor voltage expression to help find the resistor and capacitor voltages.