

Homework #7, Ch.9 EE 202
DUE DATE: May 13th, 2013

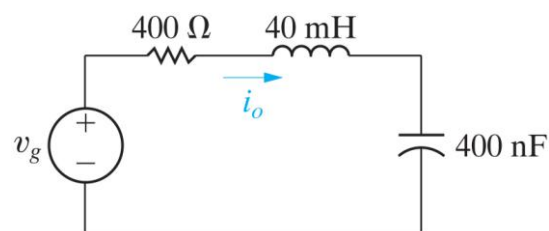
Problem #1

The circuit shown is operating in the sinusoidal steady state. Find the value of ω if

$$i_o = 10 \sin(\omega t + 51.87^\circ) \text{ mA}$$

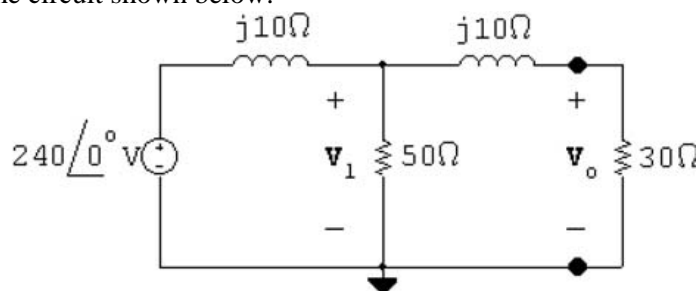
$$v_g = 5 \cos(\omega t - 15^\circ) \text{ V}$$

What is the phase difference between the voltage and current, take the voltage as reference.



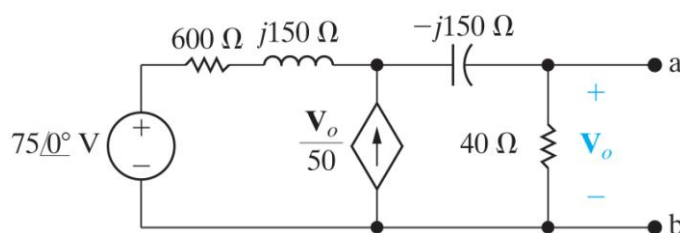
Problem #2

Find the voltages V_1 and V_0 of the circuit shown below:



Problem #3

Find the Thevenin equivalent circuit with respect to the terminals a, b of the circuit shown below:



Problem #4

A) Use the node-voltage method (Check using Mesh Analysis) to find the phasor voltage V_g and phasor current I_g in the circuit shown below:

