

Universidad de Puerto Rico
Recinto Universitario de Mayagüez
Departamento de Ingeniería Eléctrica y Computadoras

INEL 4075 Asignacion #6:

Semana de lunes 29 de abril de 2013.

Nombre: _____

Sección: _____

1.

P5.50. Consider the circuit shown in Figure P5.50. Find the phasors $\mathbf{V}_s$, $\mathbf{I}$, $\mathbf{V}_L$, $\mathbf{V}_R$, and $\mathbf{V}_C$. Compare the peak value of $v_L(t)$ with the peak value of $v_s(t)$. Do you find the answer surprising? Explain.

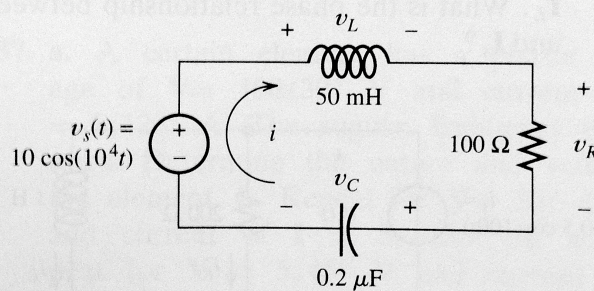


Figure P5.50

2.

P5.54. Solve for the node voltage shown in Figure P5.54.

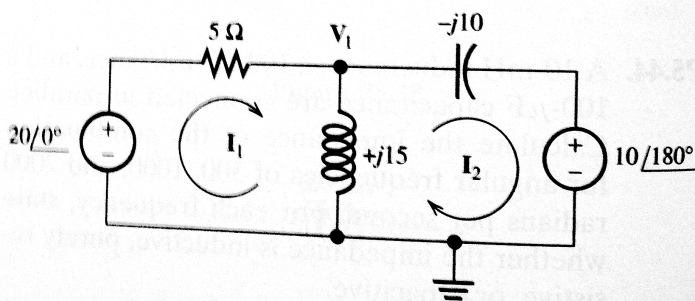


Figure P5.54

3.

We have a load with an impedance given by $Z = 30 + j40 \, \Omega$. The voltage across this load is $\mathbf{V} = 1500\sqrt{2}\angle 30^\circ \, \text{V}$. Is the load inductive or capacitive? Determine the power factor, power, reactive power, and apparent power delivered to the load.