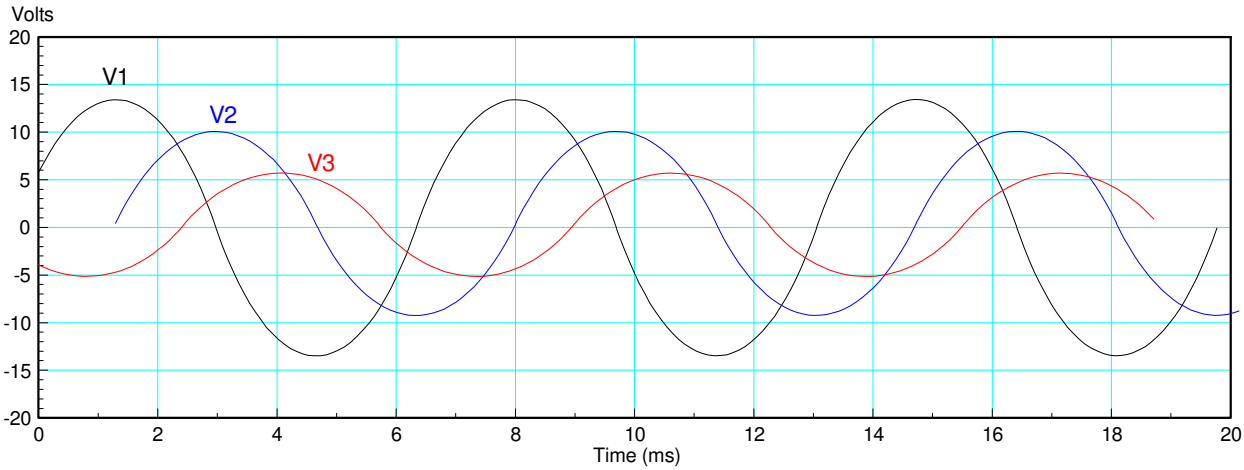
EE 206: Homework #9

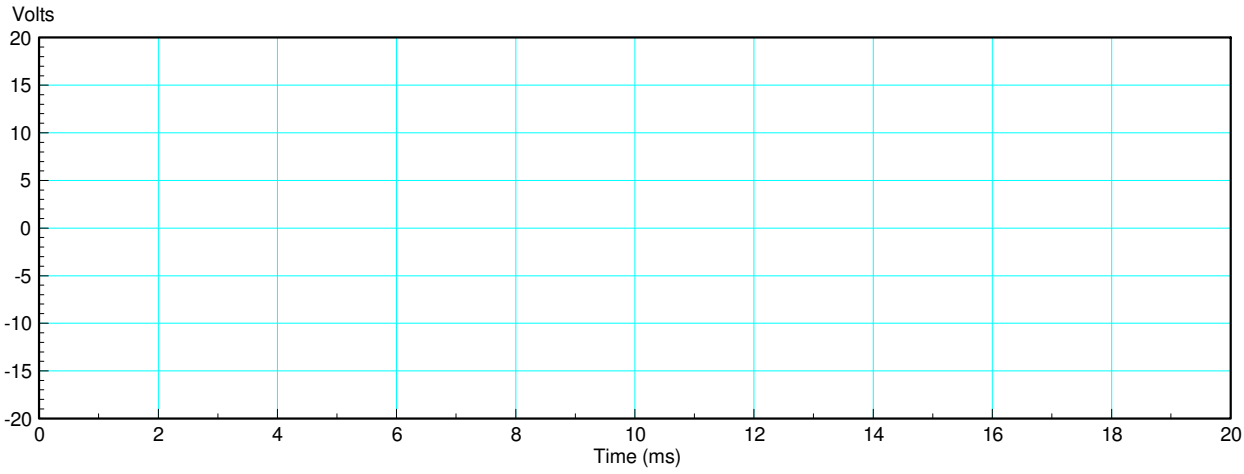
Phasors, Passive Circuit Elements, Series and Parallel with Phasors, Voltage Nodes
Due Monday, April 1st

1) Find the frequency and phasor representation for the following voltages



2) Sketch V(t). Assume 100Hz sine waves.

- $V(t) = 15\angle -70^0$
- $V(t) = 5 - j15$



3) Determine the impedance of a resistor, inductor, and capacitor at 10, 1000, and 10k rad/sec

	R = 100 Ohms	L = 10mH	C = 10uF
10 rad/sec			
1000 rad/sec			
100k rad/sec			

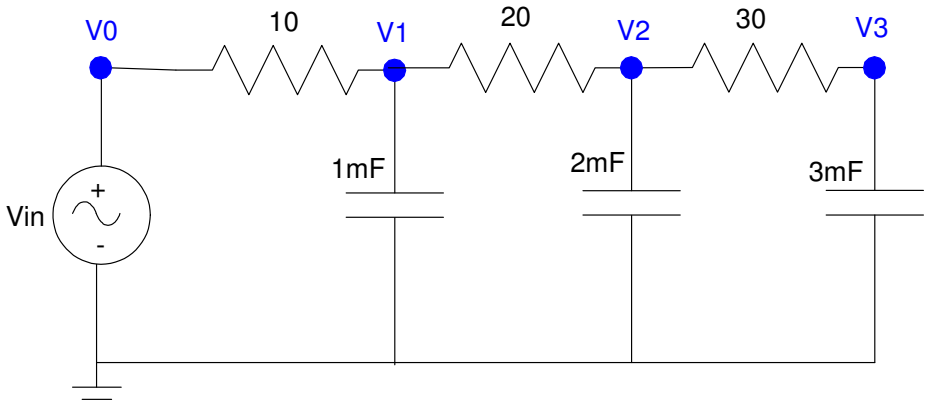
Problem 4: Assume

$$V_{in} = 10\cos(20t)$$

4a) Write the voltage node equations for the following circuit.

4b) Solve for V1, V2, and V3

4c) Simulate this circuit in PartSim and check your answers



Problem 4

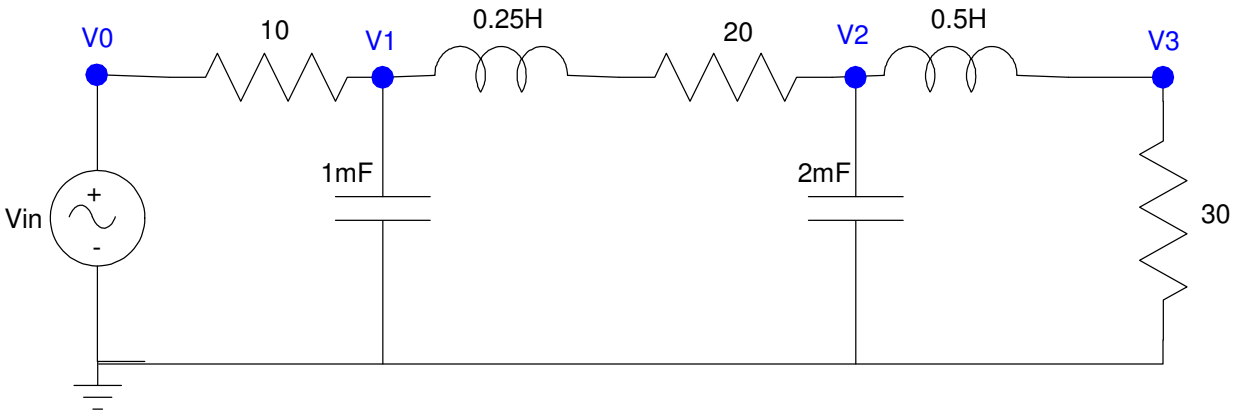
Problem 5) Assume

$$V_{in} = 5\sin(10t)$$

5a) Write the votlage node equations for the following circuit

5b) Solve for V1, V2, and V3

5c) Simulate this circuit in PartSim and check your answers



Problem 5