EE 206: Homework #9

Passive Circuit Elements, Series and Parallel with Phasors, Voltage Nodes. Due Monday, April 6th

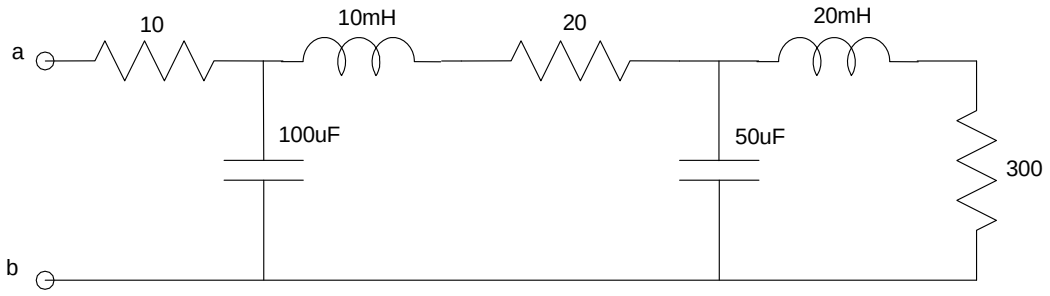
Please make the subject "EE 206 HW#1" if submitting homework electronically to Jacob_Glower@yahoo.com (or on blackboard)

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

	R = 100 Ohms	L = 10mH	C = 10uF
20 rad/sec			
200 rad/sec			
2000 rad/sec			

2) Find the impedance Zab for the following circuit at 100 rad/sec (15.9Hz)

3) Find the impedance Zab for the following circuit at 1000 rad/sec (159Hz)

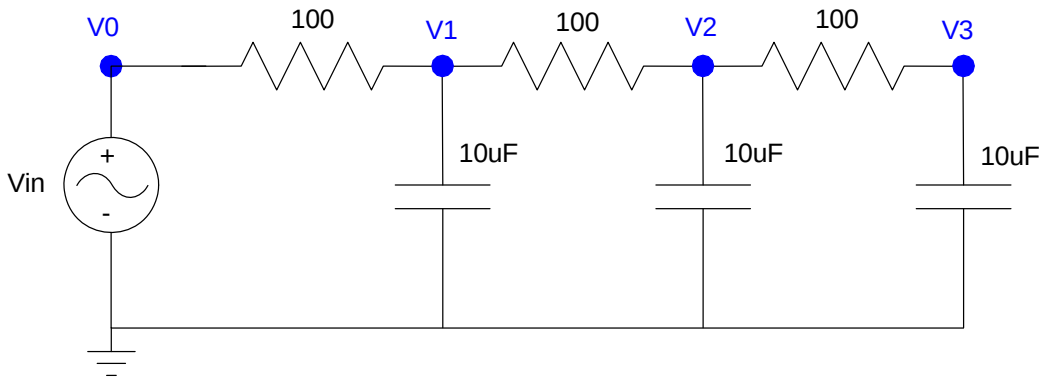


Problem 2 & 3

Problem 4: Assume $V_{in} = 10\cos(100t)$

- Write the voltage node equations for the following circuit.
- Solve for V1, V2, and V3

Problem 5) Simulate the circuit of problem #4 in PartSim (or similar program) and compare the simulation results to your results from problem #4.



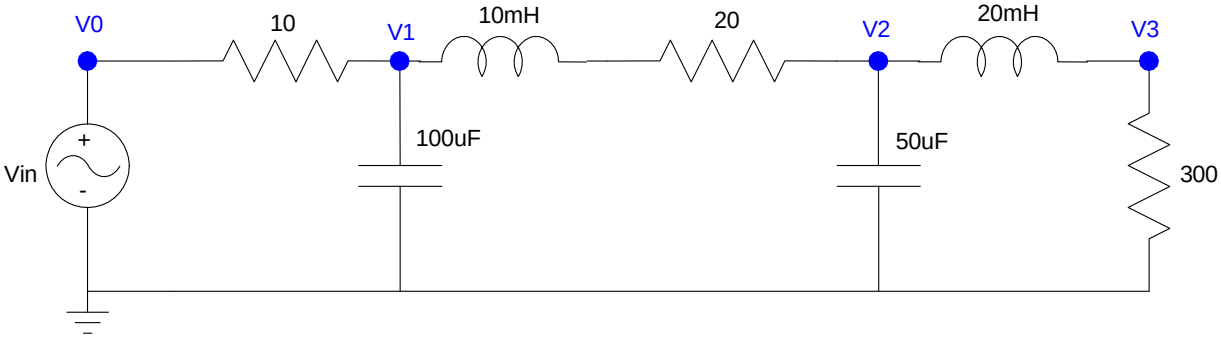
Problem 4 & 5

Problem 6: Assume

$$V_{in} = 10\cos(100t)$$

- Write the voltage node equations for the following circuit.
- Solve for V1, V2, and V3

Problem 7) Simulate the circuit of problem #6 in PartSim (or similar program) and compare the simulation results to your results from problem #6.



Problem, 6 & 7