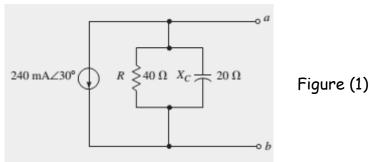
## Electrical, Electronics, and Digital Principles 2015

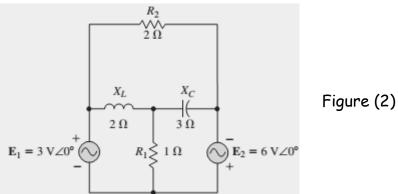
\_\_\_\_\_

## Sheet (1)... Review

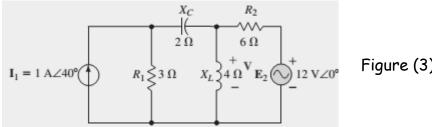
1. Convert the current source of Figure (1) into an equivalent voltage source.



2. Given the circuit of Figure (2), write the loop equations and solve for the loop currents.



3. Use nodal analysis to determine the voltage V for the circuit of Figure (3).



4. Determine the Y equivalent of the  $\Delta$  network shown in Figure (4), show how to redistribute the  $\Delta$  network to return in the form of Y.

Dr. Basem ElHalawany

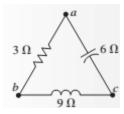


Figure (4)

5. Consider the circuit of Figure (5), Find VR using the superposition theorem.

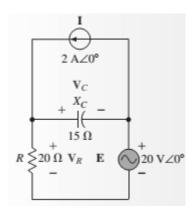


Figure (5)

6. Determine the Thévenin equivalent circuit external to ZL in the circuit in Figure (6)

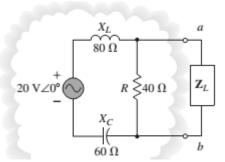


Figure (6)

7. Repeat the previous problem but by using the Norton equivalent.

Good Luck