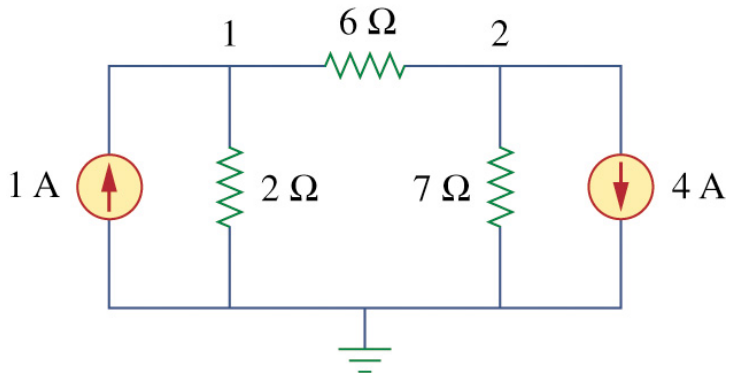
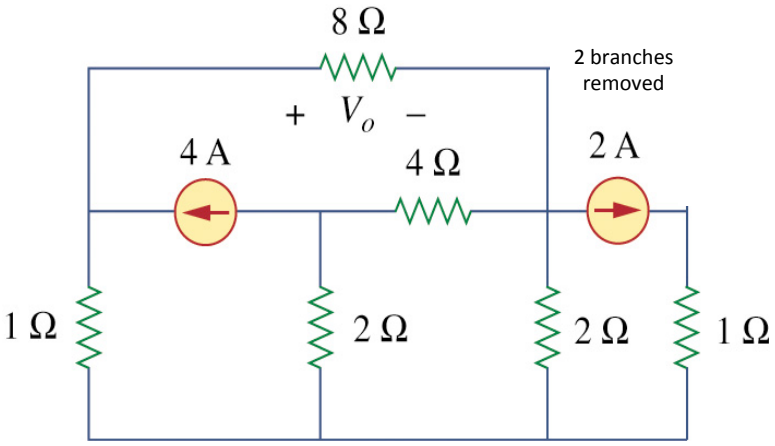
CMPE306 Fall 2019 Homework L05
Assigned 11/25/19 Due 12/2/19

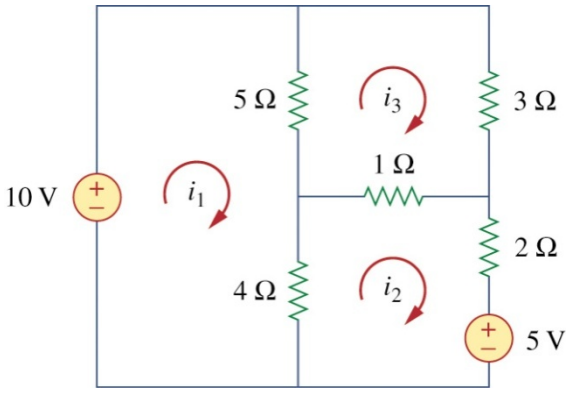
1.
Obtain the node voltages in this circuit using nodal analysis by inspection. Remember that the coefficients in the matrix are *conductances*, not *resistances.* Use MATLAB to solve for the node voltage values.



2: Use nodal analysis by inspection and then find V_0 in the following circuit (updated 2/9/2017).



3.
Obtain the matrix equation for the mesh currents in the circuit at the right by inspection, then solve for the mesh currents using MATLAB.



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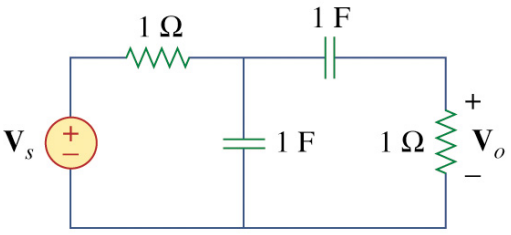
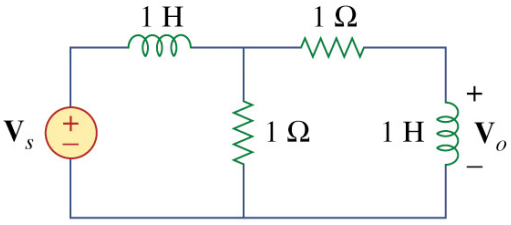
4. Determine the center frequency and the bandwidth of the frequency selective circuits in the following figure. You may use inspection techniques if your wish. Treat $\mathbf{H}(\omega) = \dfrac{\mathbf{V}_o(\omega)}{\mathbf{V}_i(\omega)}$ and apply the condition for resonance.



(a)



(b)