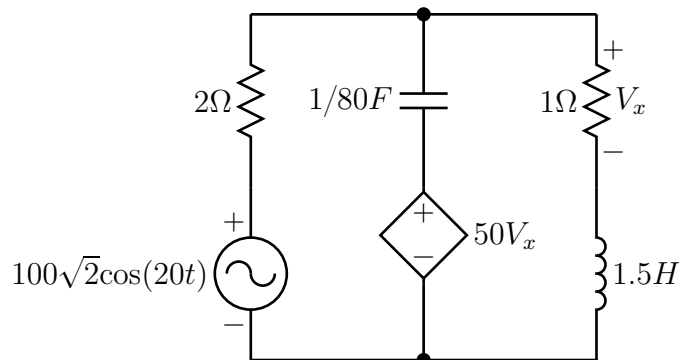
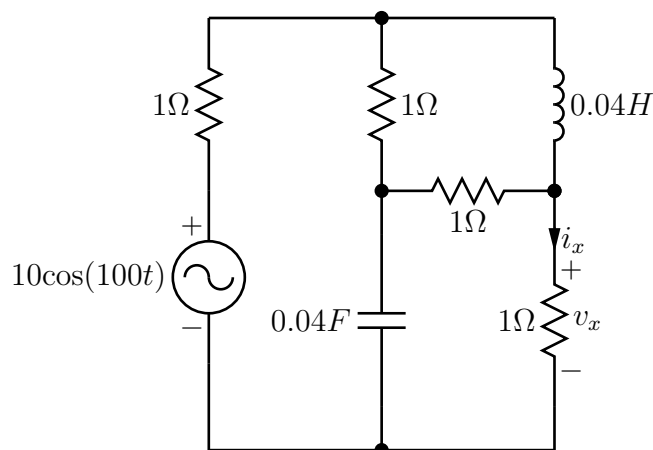


EEE33 1st Semester AY2011-12, Sinusoidal Steady State Analysis HW1

- Two similar capacitors are connected in parallel to a $200V_{\text{RMS}}$, 1KHz sinusoidal voltage source. Find the value of each capacitor (in F) if the current being drawn from the source is $0.628A_{\text{RMS}}$.
- For the figure below:



- Draw the transformed circuit.
 - Solve for $V_x(t)$.
 - Solve for the reactive power delivered to the capacitor.
 - Solve for the power and reactive power supplied by the independent voltage source.
- For the figure below:



- Draw the transformed circuit.

(b) Solve for $v_x(t)$ and $i_x(t)$ by getting the Thevenin equivalent circuit seen by the 1Ω resistor.

4. For the circuit below, solve for $v_L(t)$.

