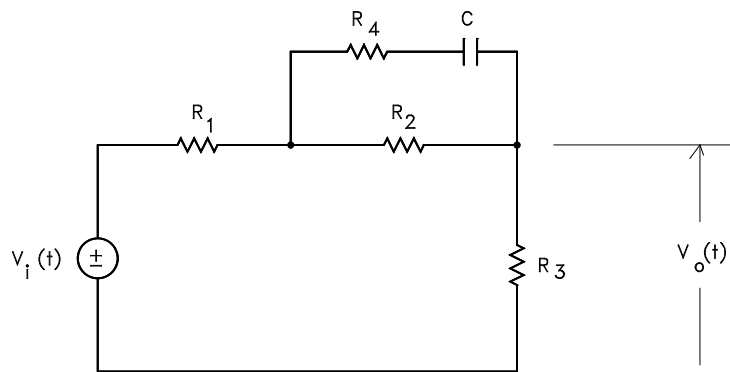


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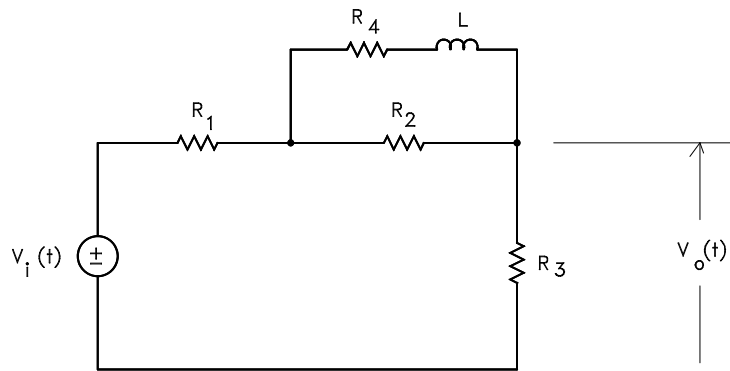
Homework Problem Set No 2 for Experiment No. 3

Due First Meeting Week of June 4

1. Determine the complex transfer function for the two circuits shown below. Express the answer in terms of the symbols for the circuit components and the complex frequency variable s . Express the answer as a ratio of polynomials in s .
2. Plot the Bode plot for the two circuits using Mathcad. Plot the frequency response one decade below the lowest critical frequency and one decade above. The values of the circuit components are $R_1 = 4.3\text{ k}\Omega$, $R_2 = 240\text{ k}\Omega$, $R_3 = 4.3\text{ k}\Omega$, $L = 3\text{ mH}$, $R_4 = 7.3\text{ k}\Omega$, and $C = 10\text{ nF}$.
3. Make the same plot as in Problem 2 using Matlab.
4. Make the same plot as in Problem 2 using National Instruments SPICE (Multisim).
5. Make the same plot as in Problem 2 using LTSpice (text editor input mode).



Circuit 1



Circuit 2