

GEORGIA INSTITUTE OF TECHNOLOGY
School of Electrical and Computer Engineering

Course EE 2250
Electric Circuit Analysis

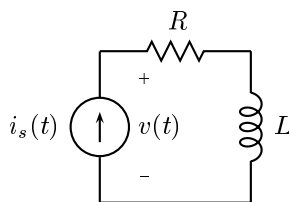
Assigned: May 13, 1999

Due: May 20, 1999

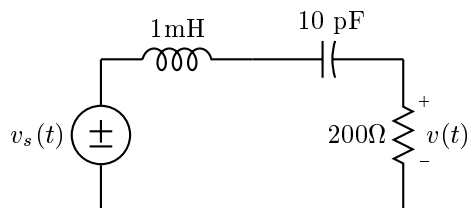
Problem Set #7

Reading: Read the following sections from Dorf and Svoboda:
Chapter 10, Sections 10.3–10.9; (Sinusoidal Steady-State Analysis)

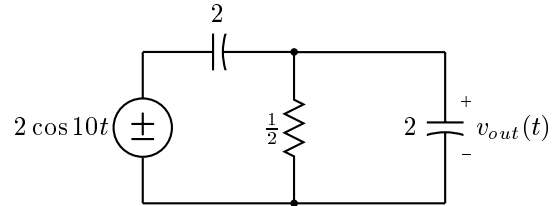
Problem 7.1: Find the value of the current $v(t)$ when the current is the complex exponential time function $i_s(t) = e^{j\omega t}$.



Problem 7.2: For the circuit below find $v(t)$ when $v_s(t) = \cos(\omega t)$.

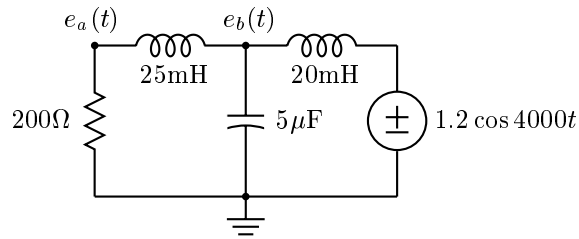


Problem 7.3:

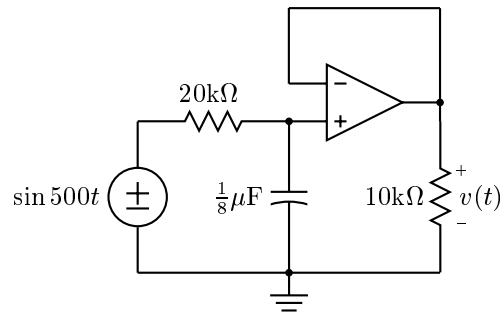


Determine $v_{out}(t)$ for all t .

Problem 7.4: Find the two node voltages $e_a(t)$ and $e_b(t)$ in the circuit below.



Problem 7.5: For the circuit below find $v(t)$.



Problem 7.6: Find $v_{out}(t)$ if $v_{in}(t) = 3 + 4 \sin(1000t)$. The terminals are *open-circuited*.

