

HW #7
ME104
Due Friday 11/20 at 5pm
(in box outside of CAD Lab)

Problem 1. 9.21 from the text (use phasor analysis)

Problem 2. Recreate figures 9.47 and 9.48 in the text using equations 9.67 and 9.68, and Matlab or other graphing software. Note that one plot is log-log and the other is linear-linear.

Problem 3. For the magnetic circuit in the figure below, a voltage $V_1(t) = V_0 \cos(\omega t)$ is applied to the coil 1 having N_1 turns. The second coil is not connected to any load and had no current in it.

- a) What is the sinusoidal steady-state current in coil 1?
- b) What is the voltage on coil 2 having N_2 turns?
- c) What is the sinusoidal steady-state flux in the magnetic circuit?

