3-26) The equations for each mass are

$$m_1\ddot{x}_1 = -b_1(\dot{x}_1 - \dot{x}_2) - kx_1 + F\cos\omega t$$

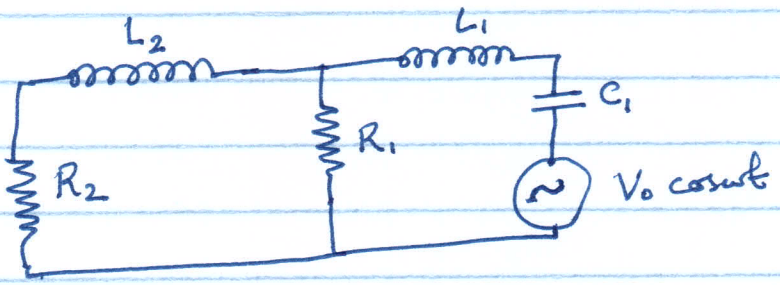
$$m_2\ddot{x}_2 = -b_1(\dot{x}_2 - \dot{x}_1) - b_2\dot{x}_2$$

We learned that the analogs of mass, friction, and restoring force are L, R, and $\frac{1}{C}$ respectively. Thus the analogous equations for a circuit are

$$L_1\ddot{q}_1 + R_1(\dot{q}_1 - \dot{q}_2) + \frac{1}{C_1}q_1 = V_0\cos\omega t$$

$$L_2\ddot{q}_2 + R_1(\dot{q}_2 - \dot{q}_1) + R_2\dot{q}_2 = 0$$

Notice that the common term is the $R_1(I_1 - I_2)$ term, so the circuit is



The impedance seen by the source is

$$\frac{1}{i\omega C_1} + i\omega L_1 + \frac{R_1(R_2 + i\omega L_2)}{R_1 + R_2 + i\omega L_2}.$$