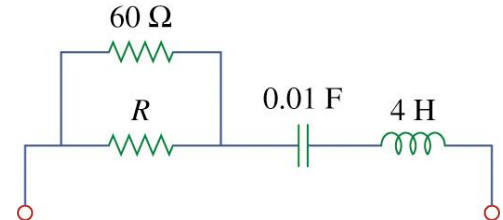


**P1** Design a parallel RLC circuit with  $R = 2\text{k}\Omega$  that has the characteristic function

$$s^2 + 100s + 10^6 = 0$$

Hint: see readings to see how the characteristic function maps to  $\alpha$  and  $\omega_o$ .

**P2** Calculate the value of  $R$  so the response of the circuit is critically damped.



**P3** Find  $i(t)$  in the circuit below if the capacitor is initially discharged.

