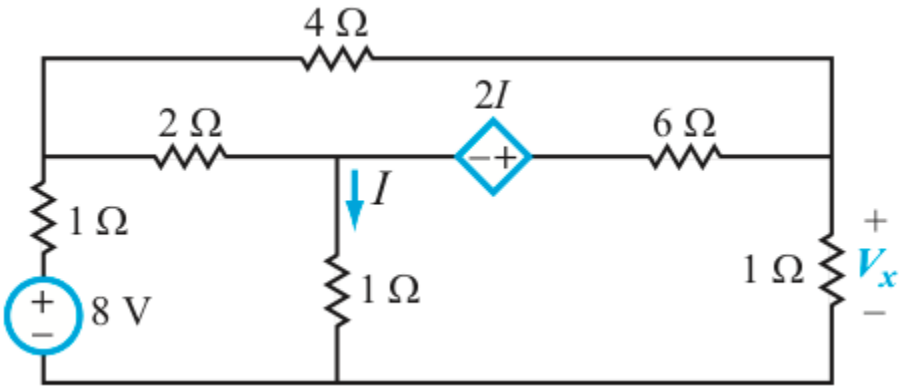
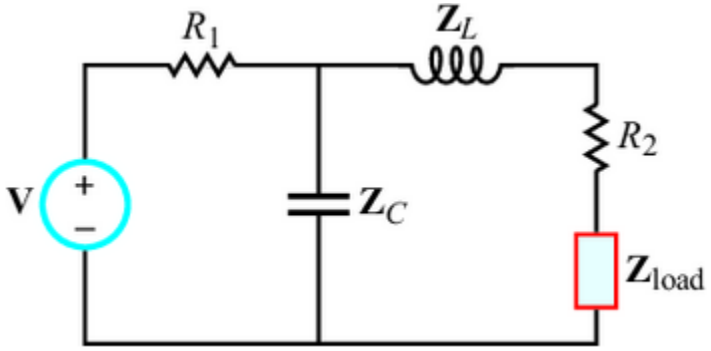
DC with dependent source: determine $V_x$ in the circuit below.




---

AC Thevenin equivalent and maximum power transfer: choose the load impedance such that the power dissipated in it is maximized. How much power will that be?

$V = 20\angle 0°V; R_1 = 10\Omega, R_2 = 5\Omega, Z_c = -j5\Omega; Z_L = j3\Omega$




---

Second order transient. Determine $v_C(t)$ for $t > 0$.