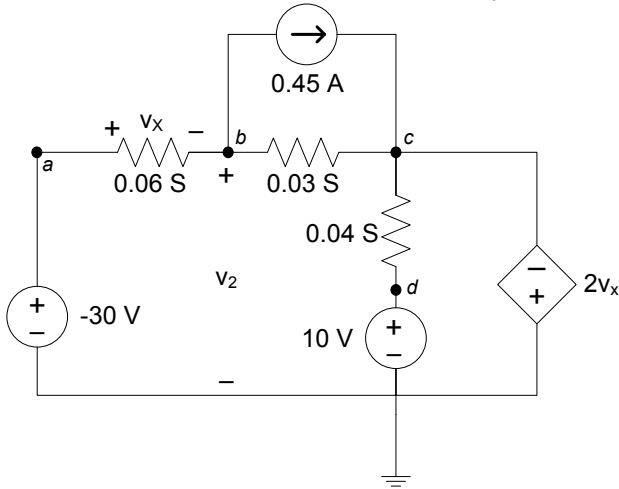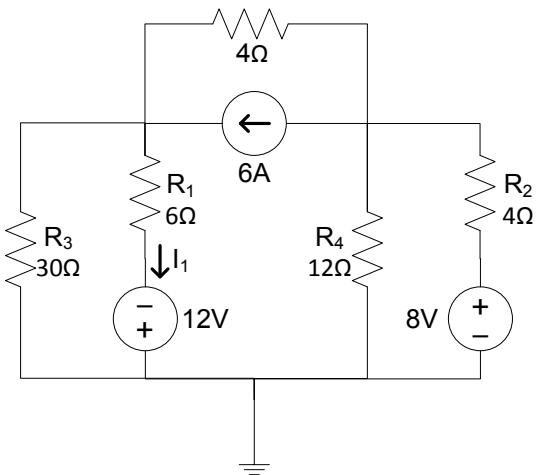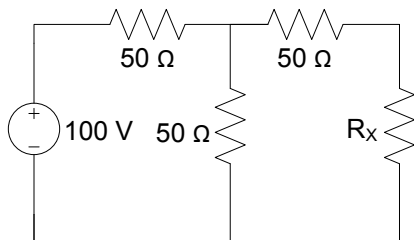1. Find v_2 using nodal analysis. (S stands for Siemens – the unit for conductance)

2. Using the principle of superposition, find the current I_1.
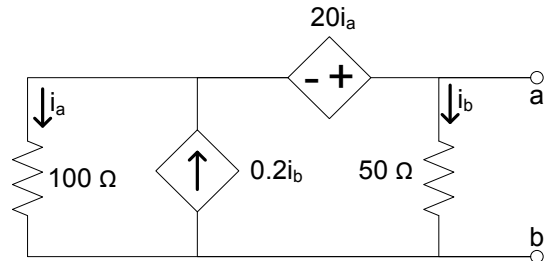

3. a) Determine the resistance of resistor R_X such that R_X receives maximum power.
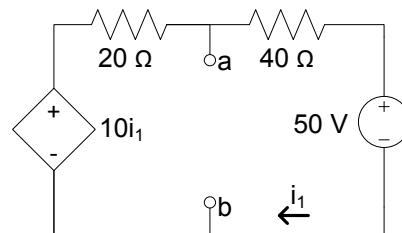   b) Determine the power that R_X receives in a).

4. Determine the Thevenin and Norton equivalent circuits seen across terminals a and b.

    4.1.

    4.2.

5. Find V_o in terms of V_i.