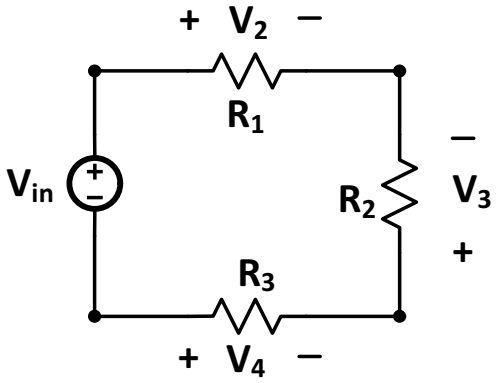
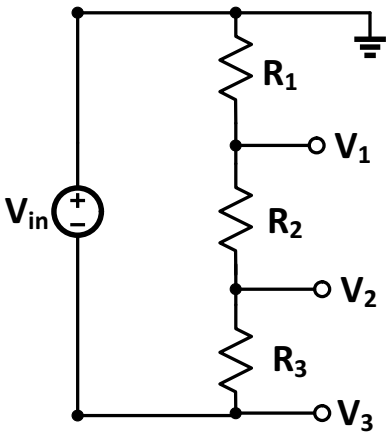
ECE 205 - WS2

Name: **UIN:**

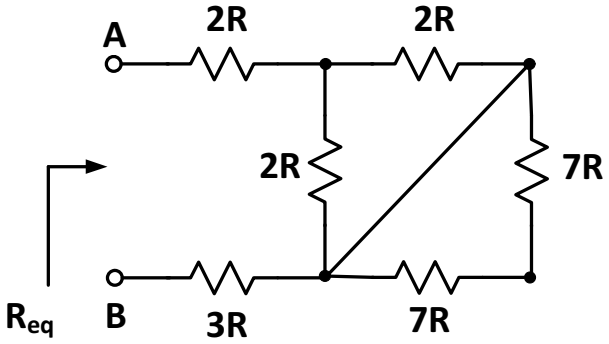
1. Compute voltages $\mathbf{V_2}$, $\mathbf{V_3}$, and $\mathbf{V_4}$ in the circuit shown below. Assume: $\mathbf{V_{in} = 9V}$, $\mathbf{R_1 = 3k\Omega}$, $\mathbf{R_2 = 3k\Omega}$, $\mathbf{R_3 = 3k\Omega}$.



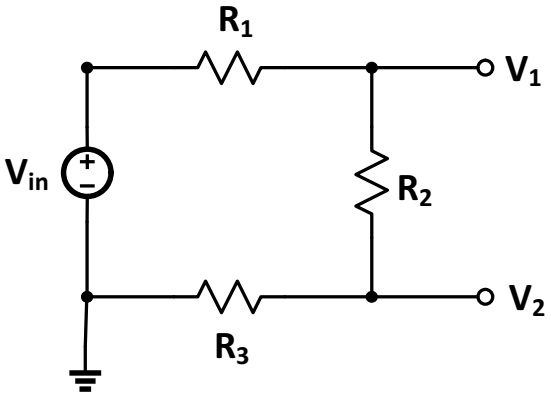
2. Compute voltages $\mathbf{V_1}$, $\mathbf{V_2}$, and $\mathbf{V_3}$ in the circuit shown below. Assume: $\mathbf{V_{in} = 9V}$, $\mathbf{R_1 = 3k\Omega}$, $\mathbf{R_2 = 3k\Omega}$, $\mathbf{R_3 = 3k\Omega}$.



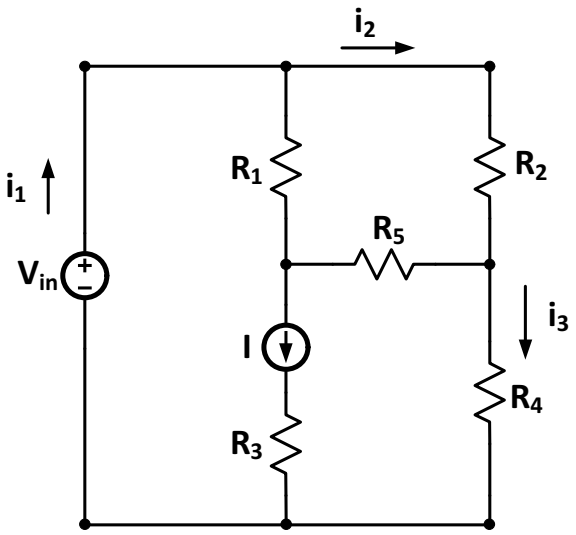
3. Compute the equivalent resistance $\mathbf{R_{eq}}$ shown in the circuit below.



4. Compute voltages $\mathbf{V_1}$ and $\mathbf{V_2}$ in terms of voltage $\mathbf{V_{in}}$ and resistors $\mathbf{R_1}$, $\mathbf{R_2}$, $\mathbf{R_3}$ in the circuit shown below.



5. In the circuit shown in the figure below, $\mathbf{V_in = 7\ V}$, $\mathbf{R_1 = 1\ k\Omega}$, $\mathbf{R_1 = 2\ k\Omega}$, $\mathbf{R_3 = 2\ k\Omega}$, $\mathbf{R_4 = 1\ k\Omega}$, $\mathbf{R_5 = 3\ k\Omega}$, $\mathbf{I = 7\ mA}$.



(a) Using the loop analysis method, write down a system of equation you will solve to compute currents $\mathbf{i_1}$, $\mathbf{i_2}$, $\mathbf{i_3}$. You must clearly mark the loops in the circuit.

(b) Solve the above system of equations.