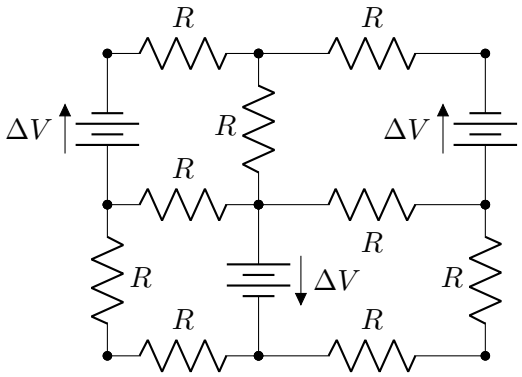
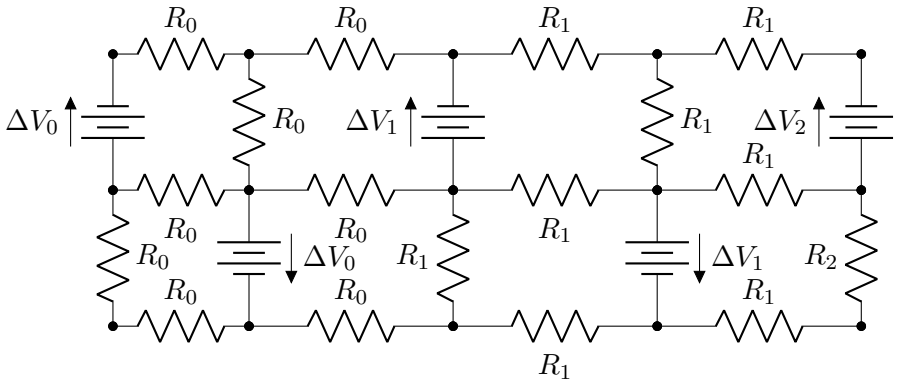
Third Challenge: solving DC circuits

Write a MATLAB script to compute the currents in each loop of the circuit



assuming $\Delta V = 10\ V$, $R = 3\Omega$. Repeat the computation for the circuit



assuming that $\Delta V_0 = 10\ V$, $R_0 = 3\Omega$, $\Delta V_1 = 1\ V$, $R_1 = 3^{-1}\Omega$, $\Delta V_2 = 10^{-1}\ V$, $R_2 = 3^{-2}\Omega$.

Repeat the computation for a circuit obtained adding to the right of the first 2×2 block N more blocks to the right, such that for the $i-$th block $\Delta V_i = 10^{-i+1}\ V$, $R_i = 3^{-i}\Omega$, for $i = 1, \ldots, N$ and $\Delta V_0 = 10\ V$, $R_0 = 3\Omega$. Consider $N = 3, 5, 10$.