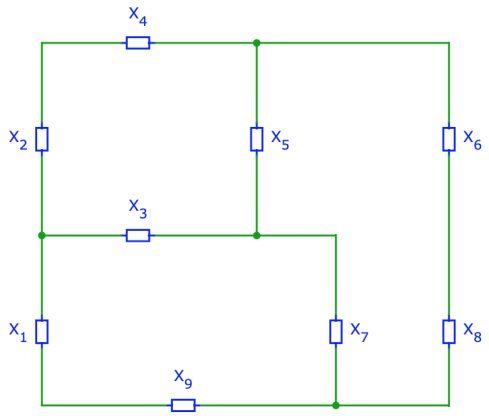
EECS 16A Designing Information Devices and Systems I
Spring 2020 Discussion 6B

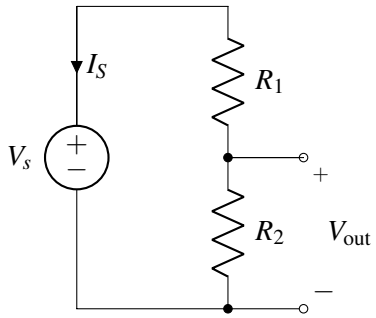
1. Nodes and Branches

In the circuit shown below, label and count all nodes and branches.



2. Divider

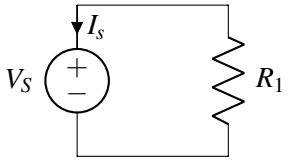
For the circuit below, find the voltage V_{out} in terms of the resistances R_1, R_2, and V_s.



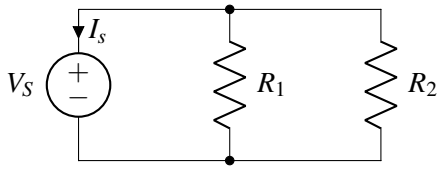
3. A Simple Circuit

Use KVL and/or KCL to solve the following circuits.

(a) For this problem assume $V_S = 1V$ and $R_1 = 1k\Omega$. Find the current, I_s flowing through the voltage source.



(b) For this problem assume $V_S = 1V$, $R_1 = 2k\Omega$, and $R_2 = 2k\Omega$. Find the current, I_s flowing through the voltage source.



(c) Now, instead of a voltage source, we have a current source (I_s) in our circuit. Find the currents I_1 and I_2 flowing through each of the resistors in terms of R_1, R_2, I_s.