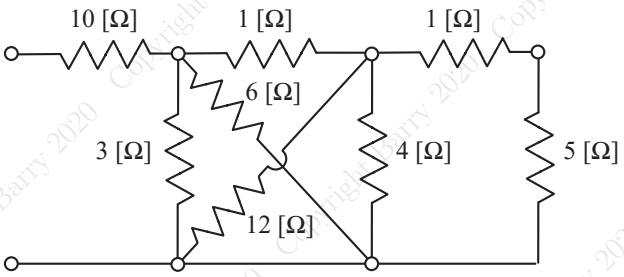
Homework #2

MEMS 0031 - Electrical Circuits

Assigned: May 15th, 2020
Due: May 20th, 2020 at 11:59 pm

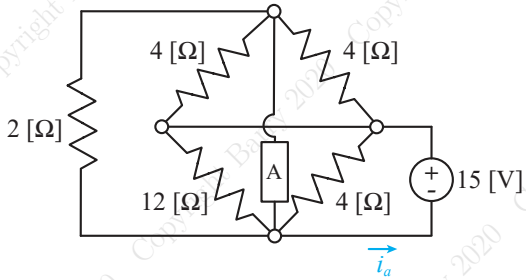
Problem #1

Given the circuit below, determine the equivalent resistance, R_{eq}. Note the bridge.



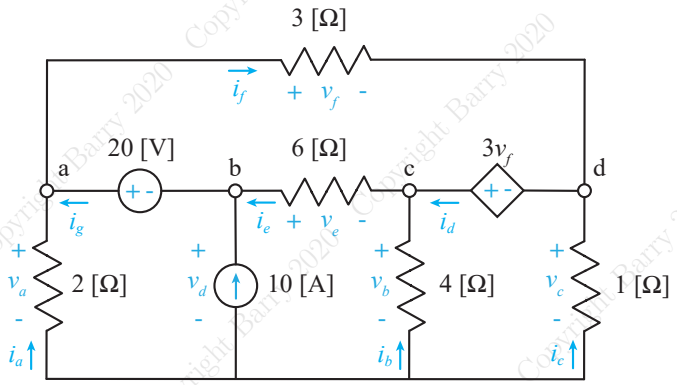
Problem #2

Given the circuit below, determine the current, i_a by using equivalent resistances. *Element A* has a resistance of 2 [Ω]. Note the bridge.



Problem #3

Using a combination of KCL and KVL, determine the currents i_a through i_g, and the voltage potentials v_a through v_f across each resistor and current source. Note: if a necessary current or voltage potential is not specified, please denote it with the next variable in alphabetical sequence.



Problem #4

Using a combination of KCL and KVL, determine the currents i_a through i_j, and the voltage potentials v through v across each resistor and current source. Note: if a necessary current or voltage potential is not specified, please denote it with the next variable in alphabetical sequence.