

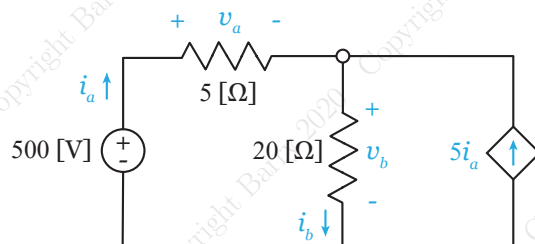
Kirchoff's Laws Worksheet

MEMS 0031 - Electrical Circuits

June 4, 2020

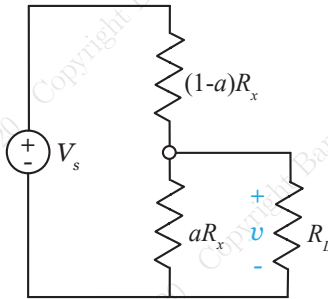
Problem #1 - Lecture 3

For the circuit shown below, determine the currents i_a and i_b and voltage potentials v_a and v_b . What is the voltage potential across the CCCS?



Problem #2 - Lecture 4

For the circuit shown below, determine the current through each resistor and the voltage v across the load resistance R_L when $V_s=15$ [V], $R_x=100$ [Ω], $a=0.36$ and $R_L=150$ [Ω].



Problem #3 - Lecture 5

In the circuit below, using KCL and KVL, construct a system of equations that allows you to solve for the current flowing through each element. Additionally, solve for i_a symbolically, in terms of all other circuit variables.

