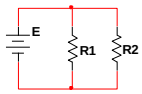
DC Kirchhoff's Current Law (43:03)

Describe in your own words Kirchhoff's Current Law

Describe how direction influences whether current is considered an input or output to a node.

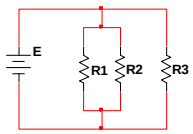


Write the KCL equation for the above circuit.

Given the above circuit and E = 48V, R_1 = 750Ω and R_2 = 910Ω, solve for V_1, V_2 I_1, I_2, I_s, and R_T making use of KCL. Does Ohm's Law agree with KCL? Does the summation of inputs equal the summation of outputs at all nodes?

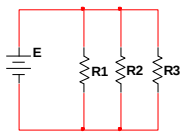
Given the above circuit has unknown resistance values and I_s=200mA and I_1=150mA solve for I_2.

Given I_A = 100mA enters node X, I_B = 200mA enters node X, I_C = 60mA leaves node X, solve for I_D entering or leaving node X.



Given the above circuit and R_3 = 120 Ω, I_2 = 20mA, I_1 and I_2 = 40mA, and I_s = 50mA solve for E, V_1, V_2, V_3, I_2, I_3, R_1, R_2, and R_T

Draw different configurations of three resistors in parallel. Do the different configurations affect source current or current through individual elements? What properties does reconfiguration affect?



Given the above circuit and R_1 = 1.2 kΩ, R_2 = 3.3 kΩ, R_3 = 2.4 kΩ, and I_1 = 30mA, solve for E, V_1, V_2, V_3, I_2, I_3, and I_S