

Notes for HW 1 on resistor circuits

In general, to solve for any V , I and R_{eq} in these circuits

1. Label and number all currents, voltages and resistances
2. Calculate the total equivalent resistance in the circuit, R_{eq} , using the methods for determining the resistance of series and parallel resistors
3. Solve for the total current from the voltage source $I_s = V_s/R_{eq}$ where V_s is the voltage of the voltage source in the circuit
4. Solve for remaining voltages, V , and currents, I , as requested using Ohm's law and the two circuit laws
 - a. Ohm's law: $V = IR$
 - b. KCL: the sum of currents into a node (with those flowing out being negative) is zero
 - c. KVL: the sum of voltages around a node is zero
5. Recall that diodes act either as a resistance of 0 or of infinity