ECE231: 01 Basic Electronics Worksheet

Name: _____ NetID: _____ Section: _____

Ohm's Law

For each problem answer the number and units.

1. Given $R = 300\Omega$, $I = 20\text{mA}$, $V =$ _____

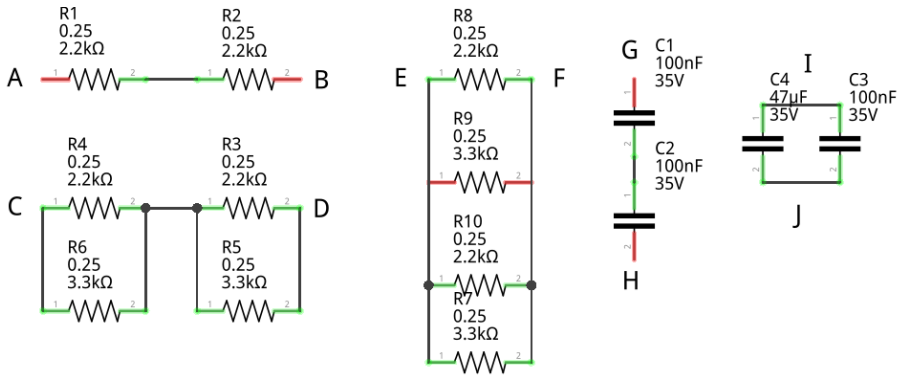
2. Given $R = 1.2\text{k}\Omega$, $I = 15\text{mA}$, $V =$ _____

3. Given $V = 9\text{V}$, $R = 470\Omega$, $I =$ _____

4. Given $V = 12V, R = 2.2k\Omega$, $I =$ _____

4. Given $V = 12V, R = 200\Omega$, $P =$ _____

Equivalent Resistance



5. $R_{eq}(A, B) =$ _____

6. $R_{eq}(C, D) =$ _____

7. $R_{eq}(E, F) =$ _____

8. $C_{eq}(G, H) =$ _____

9. $C_{eq}(I, J) =$ _____

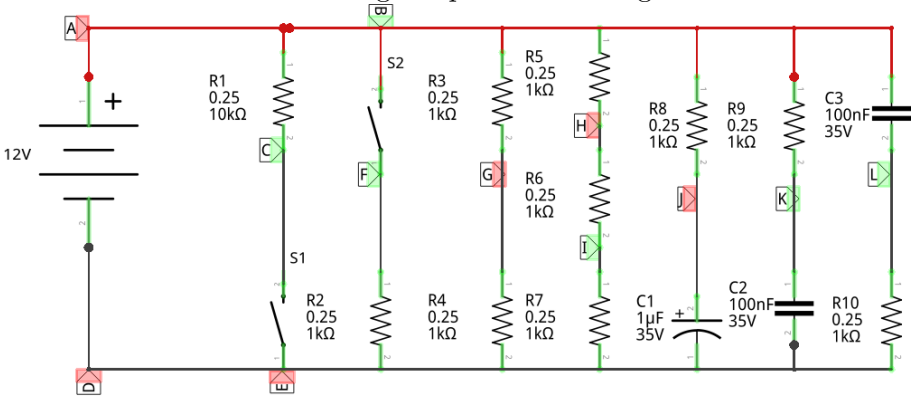
Capacitor Energy

10. Calculate energy stored in a 560μF capacitor charged to 200V.

11. A 1000μF capacitor stores 0.5J of energy. What is the voltage across it?

Circuit Analysis

Problem 12: Find the voltage at points A through L in the circuit below



A: _____ B: _____

C: _____ D: _____

E: _____ F: _____

G: _____ H: _____

I: _____ J: _____

K: _____ L: _____