

Be proficient with these formulas:

$$I = \frac{dQ}{dt}, \quad J = \frac{I}{A}, \quad J = qnv_d, \quad E = \rho J, \quad \rho = \rho_0[1 + \alpha(T - T_0)]$$

$$R = \frac{\rho L}{A}, \quad V = IR, \quad P = IV, \quad V = \mathcal{E} - Ir$$

$$Q = CV, \quad q = CV \exp\left(-\frac{t}{\tau}\right), \quad i = -\frac{V}{R} \exp\left(-\frac{t}{\tau}\right), \quad \tau = RC$$

$$\sum I_k = 0, \quad \sum V_k = 0$$

$$\vec{F} = q\vec{v} \times \vec{B} = qvB \sin \theta \hat{u}_\perp, \quad r = \frac{mv}{qB}, \quad \vec{F} = I\vec{L} \times \vec{B} = ILB \sin \theta \hat{u}_\perp$$

Review these Mastering Physics exercises:

Assignment	Exercise
9	Jumper cables and Ohm's law
9	Stretching the A-rod
10	A stretchable resistor
10	Measuring the emf and internal resistance of a battery
11	Power rating of a resistor
12	Force on moving charges
12	Force on current carrying wire

Solve these examples from the textbook. Then look at the solutions.

Chapter 25: 1, 2, 3, 5, 8

Chapter 26: 4, 5, 10, 13

Chapter 27: 4, 7