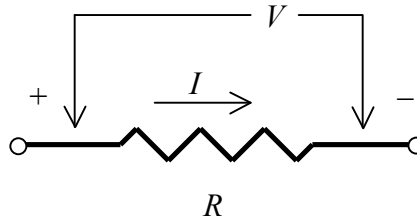
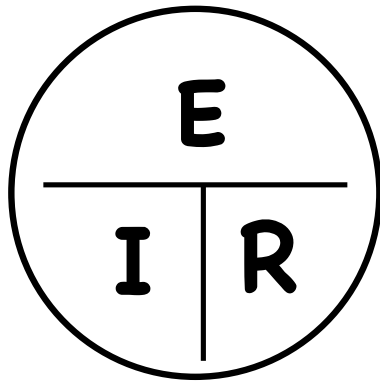


TECH-IN-A-DAY

Ohm's Law



$$E = I \times R$$

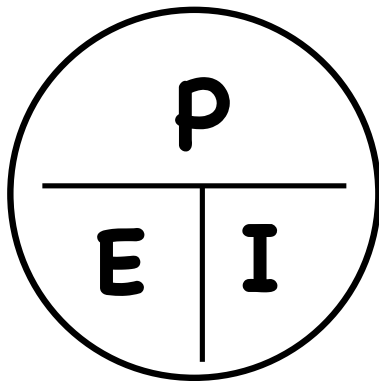
E = Voltage (V, volts)

I = Current (A, amps)

R = Resistance (Ω , ohms)

To solve, cover the unknown quantity and plug in the two known factors. For example, knowing voltage and resistance, cover I , and the solution is E (voltage) divided by R (resistance). So if 1 amp flows through a 10 ohm resistor, there will be a 10 volt drop across it.

Power



$$P = E \times I$$

P = Power (watts)

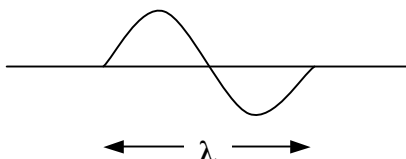
E = Voltage (volts)

I = Current (amps)

also $P = I^2 R$ or E^2 / R

Use the same technique as above to solve for the unknown quantity. So if a light bulb is screwed into a 120 V socket and draws 1 amp, the power dissipated is 120 watts. ($V \times I$).

Wavelength/Frequency



$$\text{Wavelength (meters)} = \frac{300}{\text{Freq. (MHz)}}$$

Wavelength and frequency of radio waves are related by the speed of light: $f = c / \lambda$.