

Electrical Soup

Variable	Equations	Symbols	Units
Potential Difference (Voltage)	$Potential\ Difference = \frac{Work}{Charge}$	$V = \frac{W}{q}$	$Volts(V) = \frac{Joules(J)}{Coulomb(C)}$
			$Volts(V) = \frac{electron\ volts(eV)}{e(e)}$
Current	$Current = \frac{\Delta charge}{time}$	$I = \frac{\Delta q}{t}$	$Amps(A) = \frac{C}{sec}$
Ohm's Law	Resistance	$Resistance = \frac{Voltage}{Current}$	$R = \frac{V}{I}$ $\Omega = \frac{V}{A}$
	Power	$Power = Voltage \times Current$	$P = VI$ $Watts(W) = V \cdot A$
Work (Energy)	$Work = Voltage \times Current \times Time$	$W = VIt$	$Joules(J) = V \cdot A \cdot sec$
	$Work = Power \times time$	$W = Pt$	$Joules(J) = W \cdot sec$