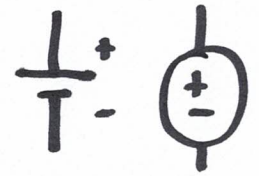
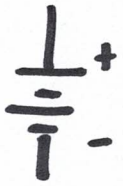



EE 220: Circuits I



(V) Voltage: units of Volts (V) - electrical potential

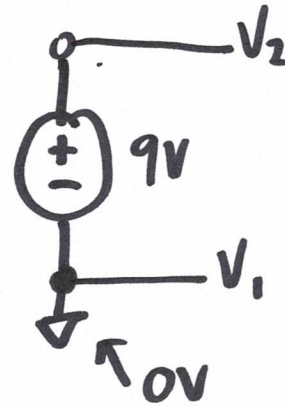
(I) Current: units of Amperes (Amps, A) $\rightarrow \frac{\text{charge}}{\text{time}}$

 (R) Resistance: units of Ohms (Ω)

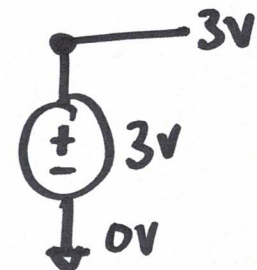
9V \rightarrow voltage source

Ohm's Law

$$V = I \cdot R$$



$$V_2 - V_1 = 9V$$



AC: Alternating Current

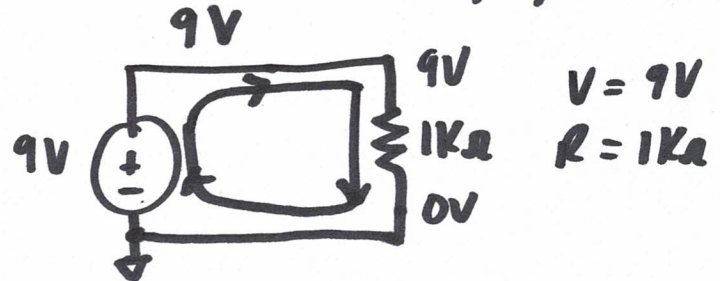
DC: Direct Current

K → 1000

Capital M → 1,000,000

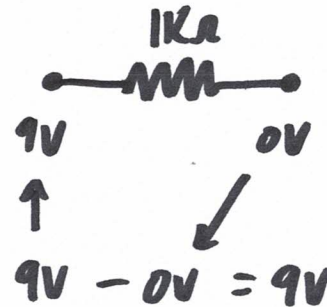
m → $\frac{1}{1000} \rightarrow 10^{-3}$

$\mu \rightarrow \frac{1}{1,000,000} \rightarrow 10^{-6}$



Ohm's Law

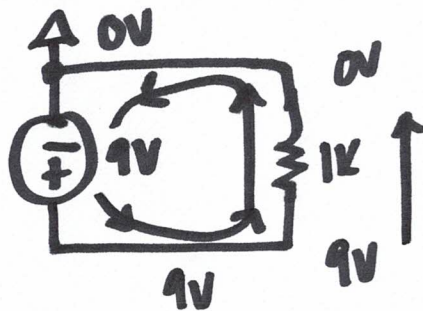
$$V = IR \rightarrow \frac{9V}{1k\Omega} = \frac{I \cdot 1k\Omega}{1k\Omega}$$



$$I = \frac{9V}{1k\Omega} = 9mA$$

$$\frac{9V}{1k} = \frac{9V}{1000} = 0.009 = 9mA$$

$$9 \cdot 10^{-3} = 9mA$$



$$V = 9V$$

$$R = 1k$$

$$I = \frac{V}{R}$$

$$= \frac{9V}{1k} = 9mA$$

$$9 \cdot 10^3 = 9k$$

