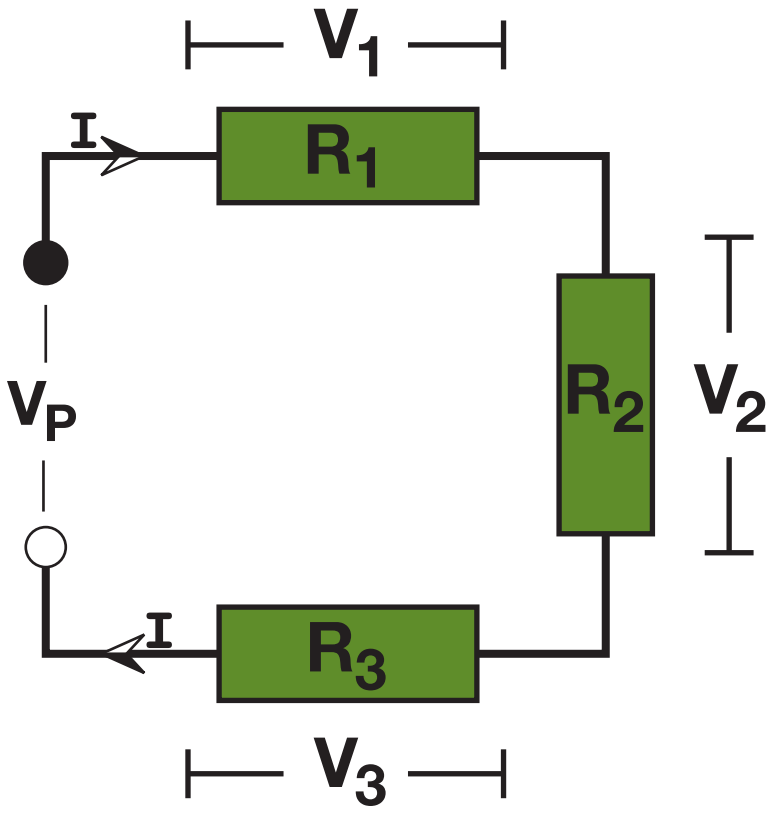
V_P = Total Voltage Applied by Power Supply

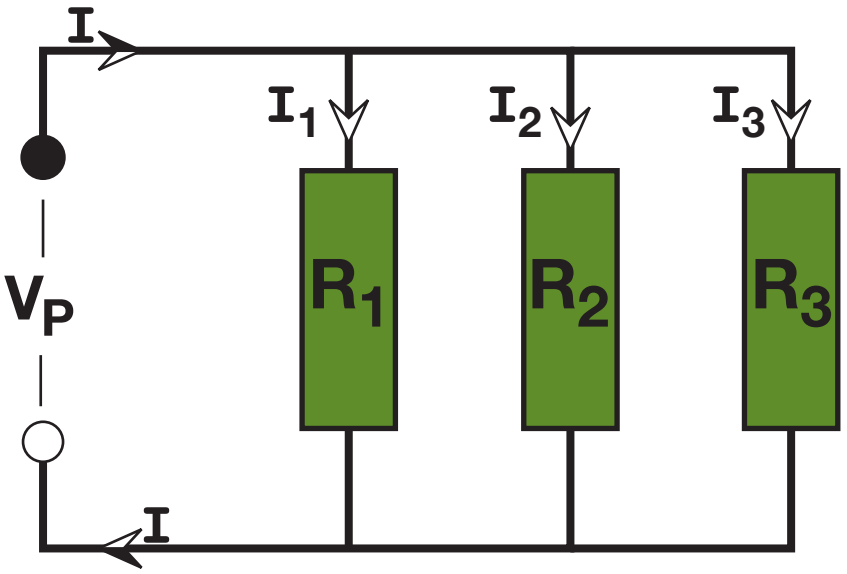
R_t = Total Circuit Resistance

I_T = Total Circuit Current

Series Circuit



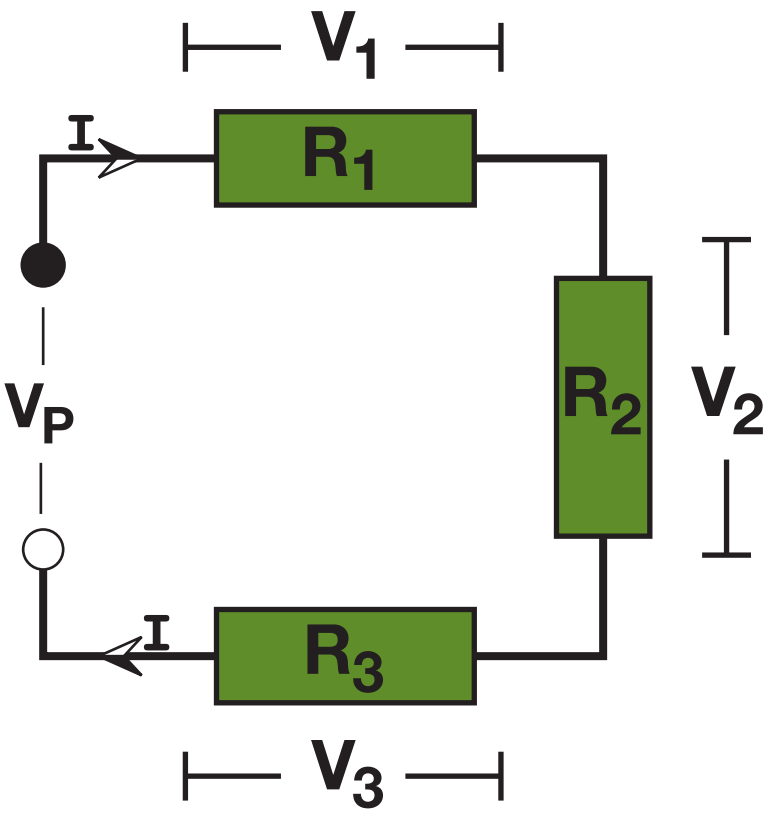
Parallel Circuit



V_P = ***Total Voltage Applied by Power Supply***

R_t = ***Total Circuit Resistance***

$I_{➤}$ = ***Total Circuit Current***



$I_{➤}$ = *Common Current*

The current through each individual component is the same as the total circuit's current which is a function of the total voltage and total resistance

$$= \frac{V_P}{R_t}$$

$$V_P = V_1 + V_2 + V_3$$

- OR -

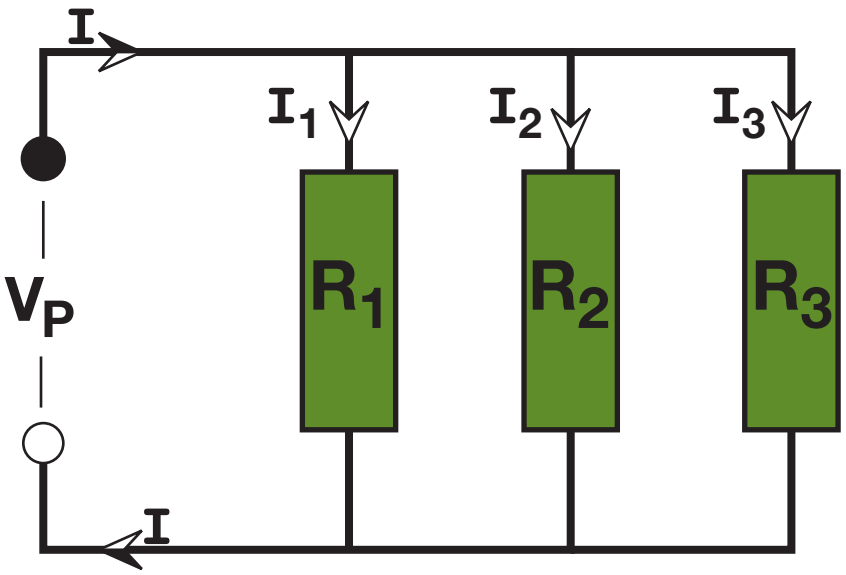
$$(I_{➤} * R_1) + (I_{➤} * R_2) + (I_{➤} * R_2)$$

$$R_t = R_1 + R_2 + R_3$$

V_P = ***Total Voltage Applied by Power Supply***

R_t = ***Total Circuit Resistance***

$I_{➤}$ = ***Total Circuit Current***



V_P = *Common Voltage*

The total circuit voltage remains constant among each individual component within the circuit

$$= I_{➤} * R_t$$

$$I_{➤} = I_1 + I_2 + I_3$$

- OR -

$$\left(\frac{V_P}{R_1}\right) + \left(\frac{V_P}{R_2}\right) + \left(\frac{V_P}{R_3}\right)$$

$$R_t = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}}$$