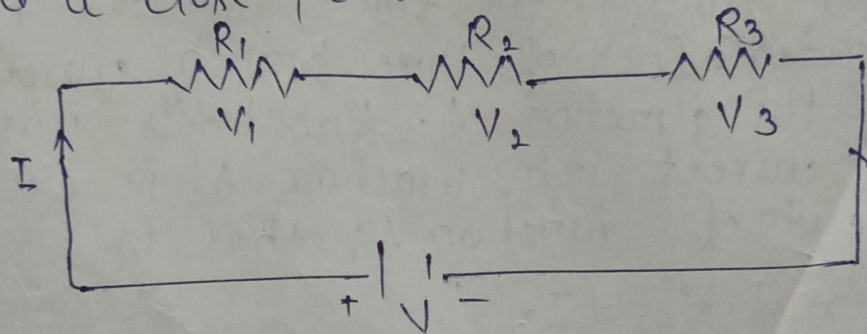


KIRCHHOFF VOLTAGE LAW

Kirchhoff Voltage Law states that "The algebraic sum of all voltages (source voltage and voltage drops) is equal to zero around a close path".



In the above circuit R_1 , R_2 and R_3 are three resistors connected in series across a voltage source V . V_1 , V_2 and V_3 are voltage drops across resistors R_1 , R_2 and R_3 respectively. So according to Kirchhoff voltage law

$$V + (-V_1) + (-V_2) + (-V_3) = 0$$

$$V - V_1 - V_2 - V_3 = 0$$

$$V = V_1 + V_2 + V_3$$

This is called KVL (Kirchhoff Voltage Law) equation.

$$V = V_1 + V_2 + V_3$$