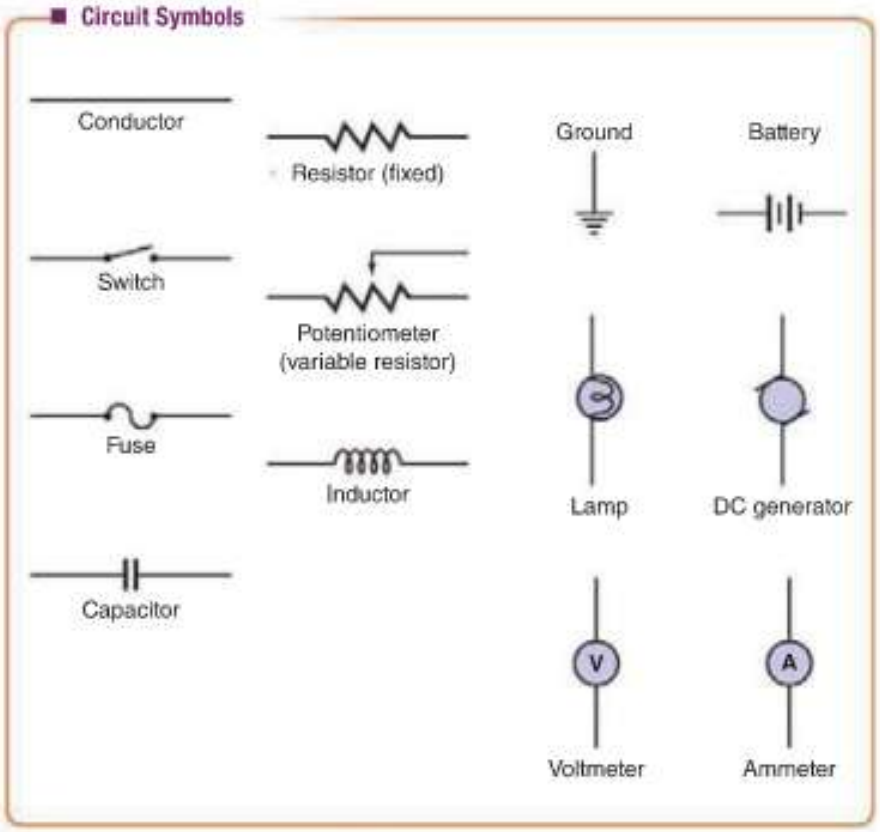
Physics Honors: Circuits

Drawing Circuits Reminder

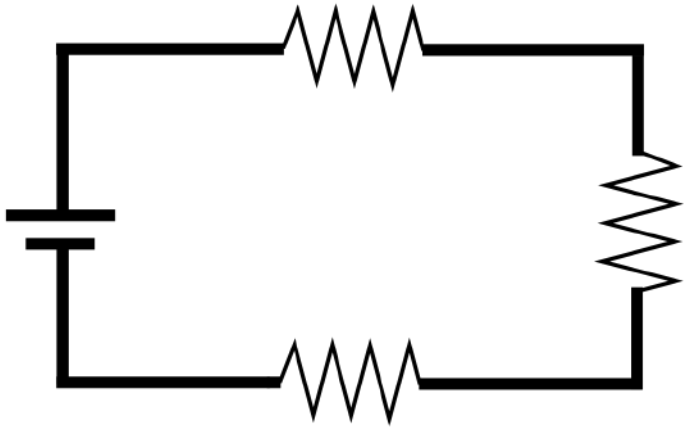


Series Circuits

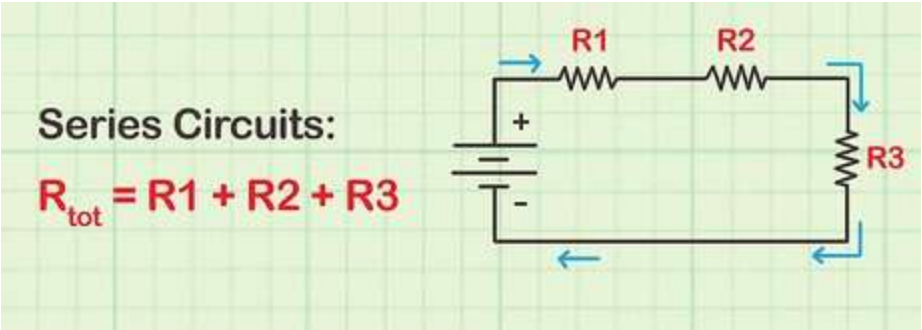
- A series circuit has only one path that electric current can follow

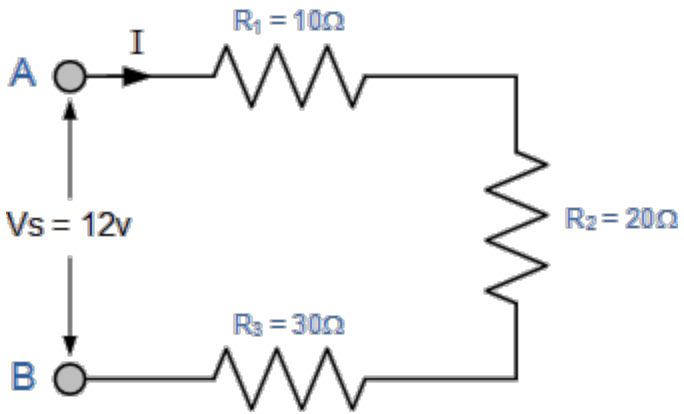
- Throughout the entire circuit, the current will stay the same, because there's only one path to follow.

- Equivalent Resistance: In a series circuit, adding the resistance from each resistor will give you the equivalent resistance

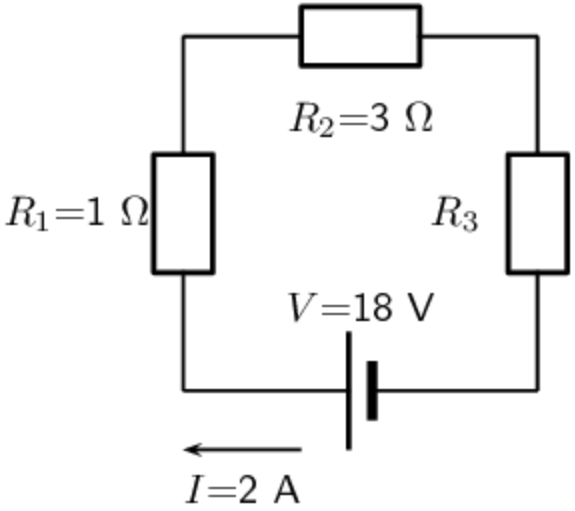


Series Circuit Equation




A
I
R1 = 10Ω
Vs = 12v
R2 = 20Ω
R3 = 30Ω
B

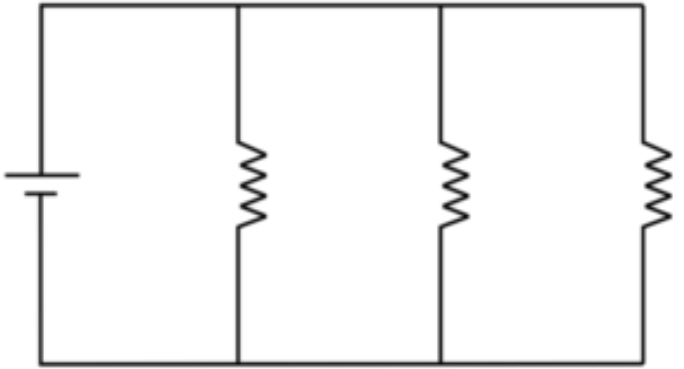
Series Equation



Parallel Circuits

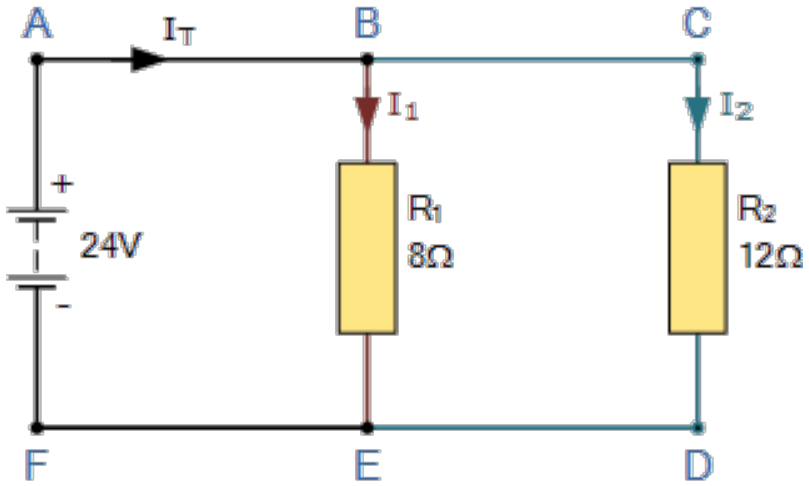
- A parallel circuit has multiple branches, and provide more than one path for electric current to follow.

- In parallel circuit, each branch has a different current flowing through it. The total current is the sum of the individual currents

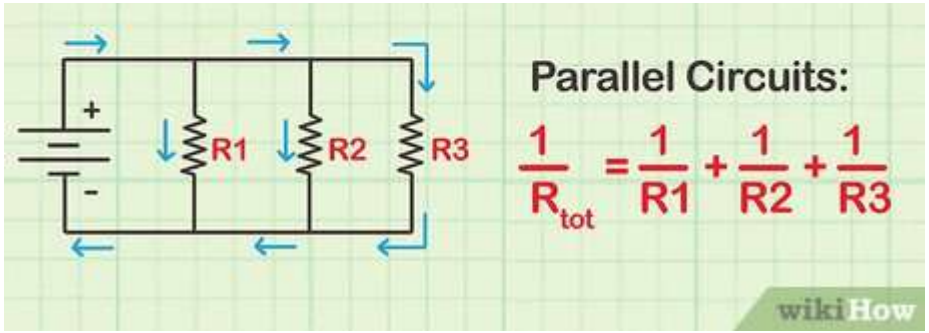


Kirchoff’s Current Law

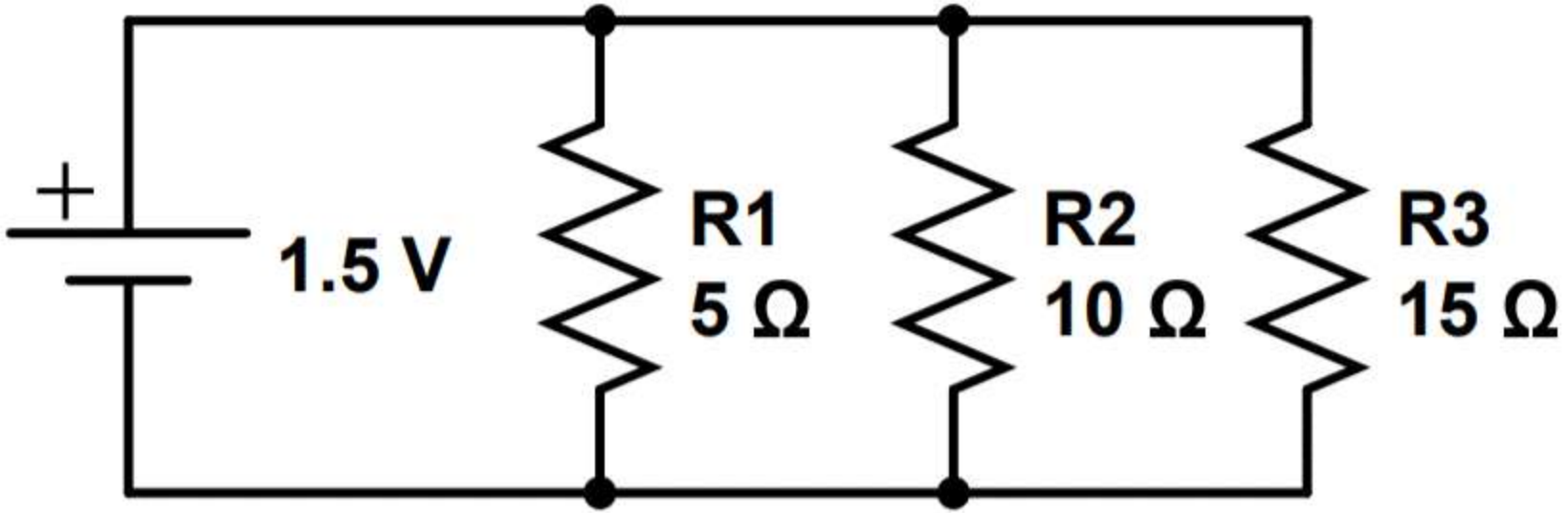
The total amount of electric current entering any junction of a circuit must equal the total amount of current leaving the junction.

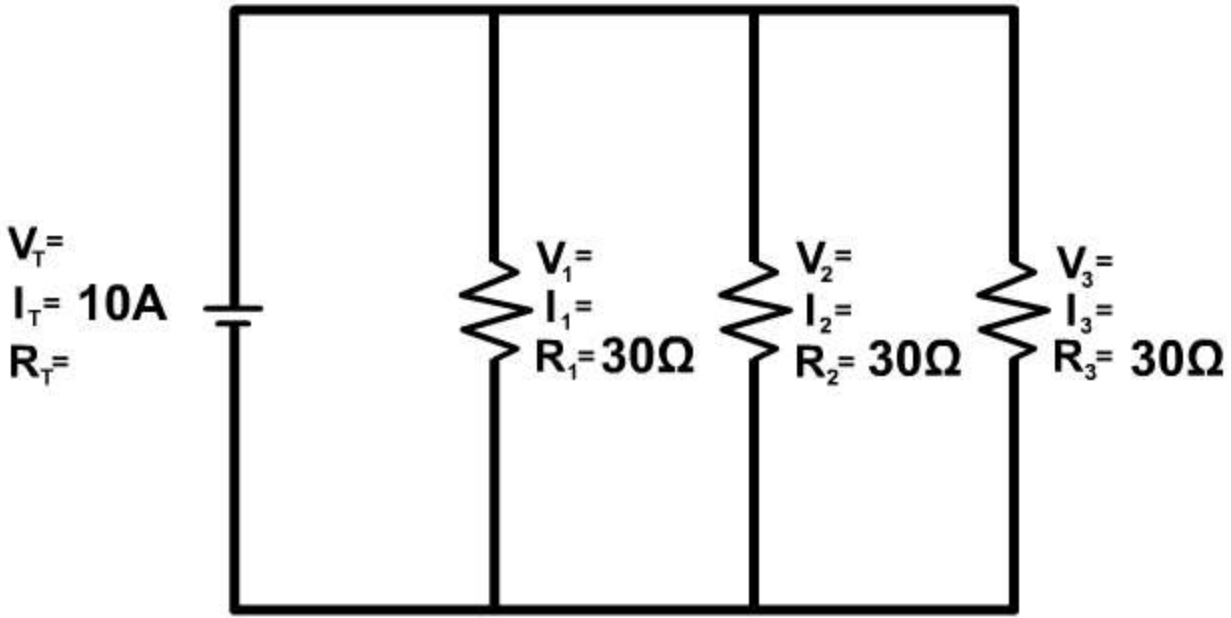


Parallel Circuits Equation



Parallel Circuits Practice




V_T=
I_T= 10A
R_T=
V_1=
I_1=
R_1= 30Ω
V_2=
I_2=
R_2= 30Ω
V_3=
I_3=
R_3= 30Ω

Complex Circuits