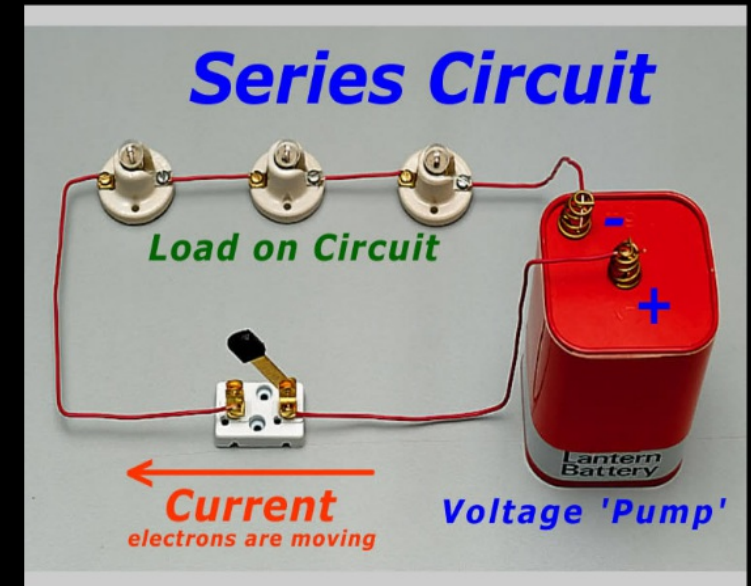


2.12.20


# Electricity: Series Circuits

## Today's Objectives:

- Recap circuit diagrams
- How series is different from the simple circuit
- Calculate voltage, amps, and resistance in a series
- Chart method - time saver



Circuit Diagrams - used to draw "blueprints" for circuits.

battery 

wires  (straight line)

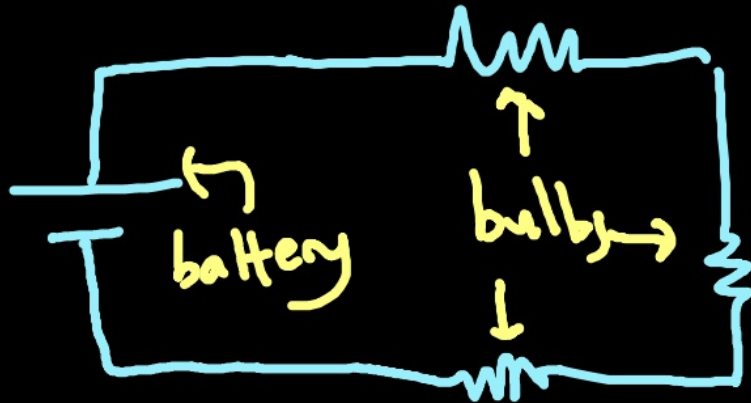
switch 

resistor  (appliance)

capacitor  (Stores electrical energy)

ammeter  (measures amps of current)

## Series Circuit Facts

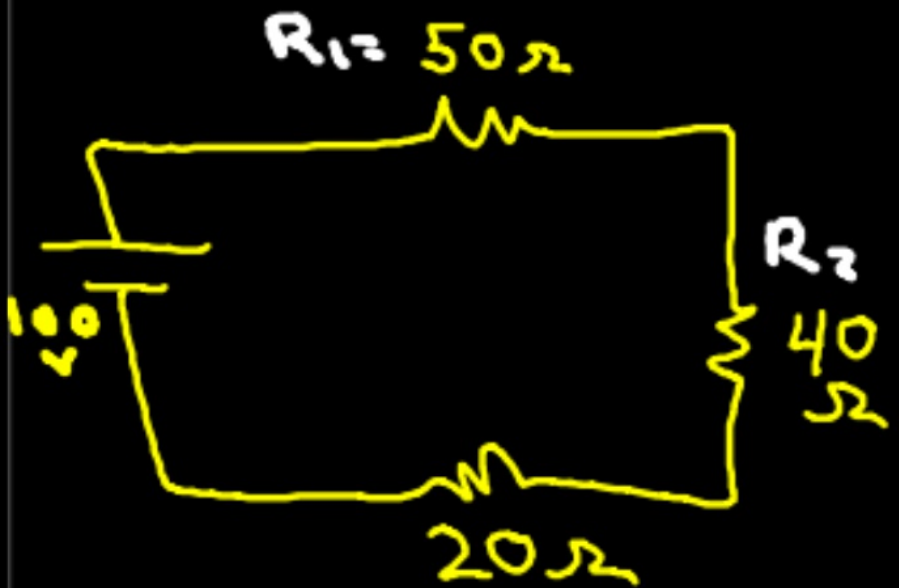


3 bulbs  
in series

- 1 path for electricity
- if one bulb goes out, they all go out.
- \* ○ Current is the same everywhere in the circuit.  
(Amps)

Total Resistance Equation (for series circuits)

$$R_T = R_1 + R_2 + R_3$$



$\rightarrow I = V / R$   
 $\rightarrow V = IR$

	Volts V	Amps I	Ohms R
R1	45.45	0.909	50
R2	36.36	0.909	40
R3	18.18	0.909	20
Total	100	0.909	110

Check  
 $45.45$   
 $+ 36.36$   
 $+ 18.18$   


---

 $99.99$

$\rightarrow$   $100?$

$100 | 110$

