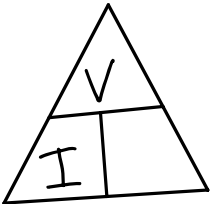


### 3. What is the Resistance at bulb 2?



Name: \_\_\_\_\_  
Blk: \_\_\_\_\_ Date: \_\_\_\_\_

## Science 9 9.1 Series and Parallel Circuits

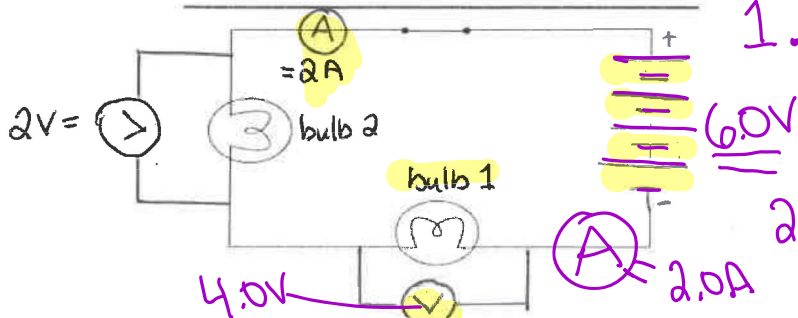
**Series Circuits:** read pgs 308-310

There is only a single pathway for current to flow

The sum of the voltages lost on the loads equals the voltage supplied by the battery

Current measured anywhere in the series circuit will be the same

Resistors placed in series increase the total resistance of the circuit.



1. What is the Voltage of bulb 1?

2. What is the Resistance of bulb 1?

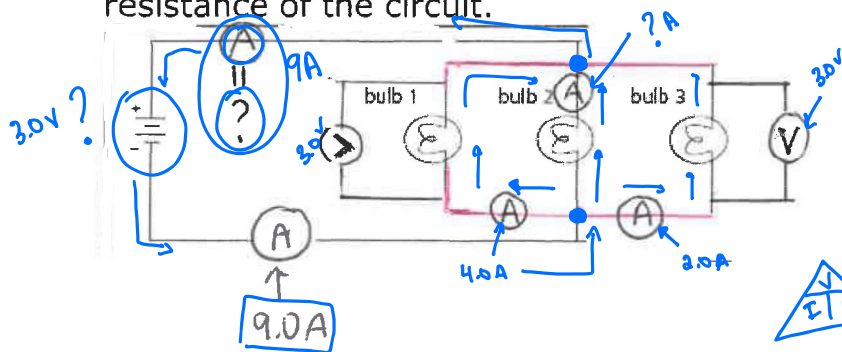
**Parallel Circuits:** read pgs 310 - 314

multiple pathways for current to flow, adding more pathways decreases resistance

Voltage remains the same through each pathway of the parallel circuit

Current (amps) split up between the different current pathways so that the path with least resistance has the greatest current, it then re-combines at a location known as the junction point

resistors placed in parallel will decrease the total resistance of the circuit.



What current travels through bulb 2?

$$\text{Total} = \text{bulb 1} + \text{bulb 2} + \text{bulb 3}$$

$$9.0A = 4.0A + ? + 2.0A$$

$$9.0 - 6.0A = 3.0A$$

What is the resistance @  
bulb 1:  $R = V \div I = 3.0V \div 4.0A = 0.75 \Omega$   
bulb 2:  $R = V \div I = 3.0V \div 3.0A = 1 \Omega$   
bulb 3:  $R = V \div I =$

