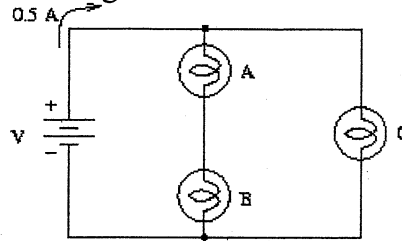## 6. WEEK 6

1. In the circuit shown, the battery supplies 0.50 A of current. The current through bulb A is 0.15 A. Find the current through bulbs B and C.

2. In this circuit, the current through bulb A is 0.20 A, while that through bulb D is 0.35 A. All bulbs are identical. (A) For the sake of argument, let us consider only nodes where three or more wires come together. (We are stating this condition since some electrical engineers would argue that there is a node between bulbs A and B, even though only two wires are connected at the "node".) How many such nodes are in this circuit? (B) Find the currents through bulbs B and C, as well as the total current supplied by the battery.
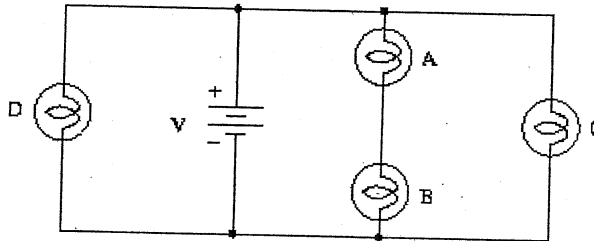
3. In both circuits shown below, the same current is supplied by the battery. The crooked lines represent nichrome wire, whose measured lengths are indicated. How long should the wire be in circuit "B"? *Explain how you know.*