

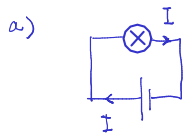
Name:

1) Alessandro Volta turns on a light bulb using a battery.

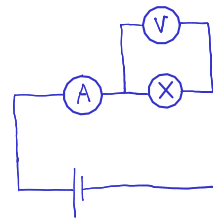
a) Draw a schematic figure of the circuit. [1 pt]

b) Is the current passing through the light bulb and the battery is the same? [1 pt]

c) Add ammeter and voltmeter to the circuit in part a, i.e. draw them, to measure the current passing through the bulb and the voltage across it. [2 pts]



b) Yes. They are in series. c)



2) Johann Schweigger is aware that the resistance of an ideal ammeter is zero (remember we used the expression 'magical wire' for ammeter), and the resistance of an ideal voltmeter is infinity. But still he might make mistakes through the 'DC Circuits' lab. In each following parts determine the value that the voltmeter or the ammeter is reading. If you want to do numerical calculations $\mathcal{E} = 4.00 \text{ V}$ and $R = 100 \Omega$. [10 pts]

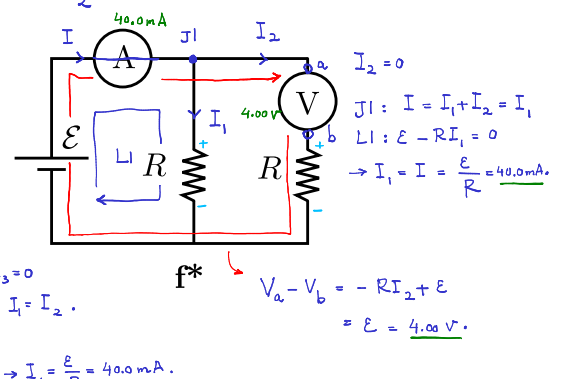
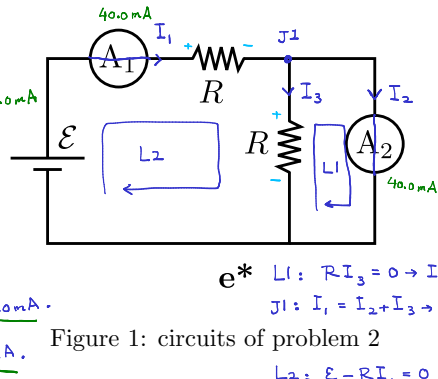
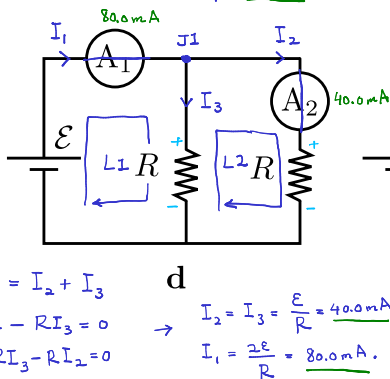
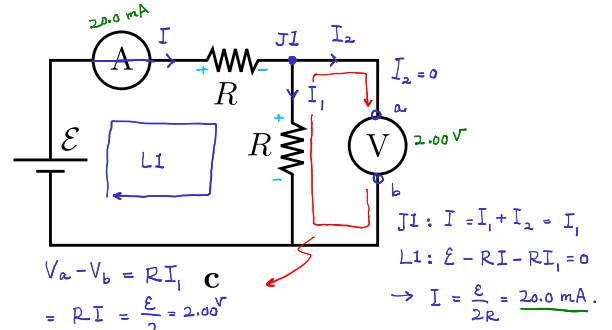
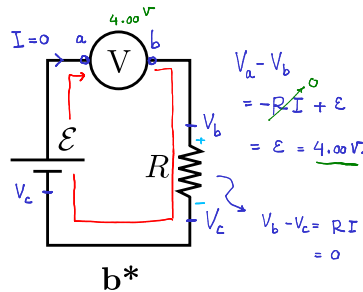
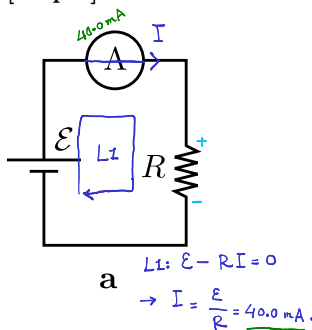


Figure 1: circuits of problem 2