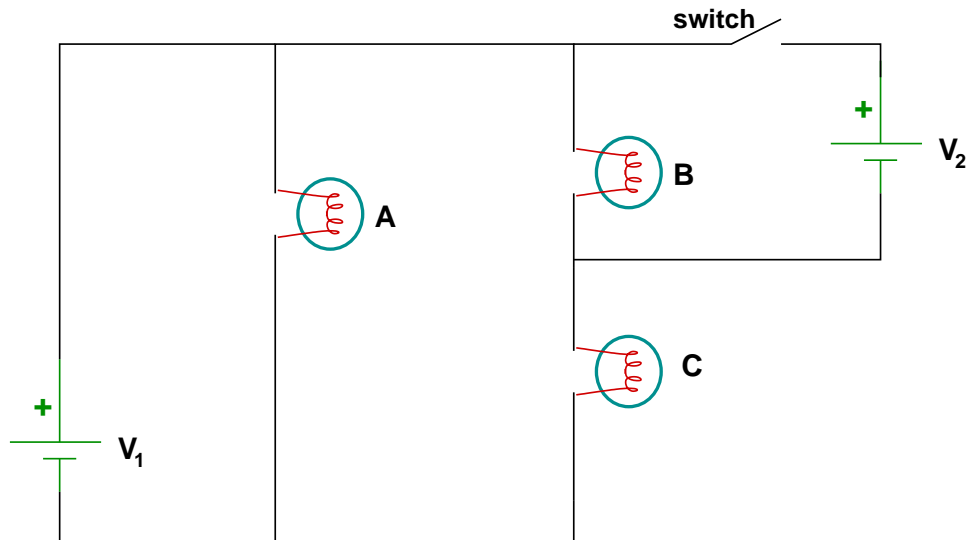


Physics 122: Practice Problem of the Day

Problem #06: A Circuit with a Switch

Saturday, 24 Jan 2008



A circuit with three identical resistor-like light bulbs is constructed as shown above. There are two ideal voltage sources and here $V_2 = \frac{V_1}{3}$

Part a) In the case that the switch remains open, what is the voltage drop across Bulb B? Explain how you determined this.

Part b) In the case that the switch remains open, rank the relative brightness (from brightest to dimmest) of the three bulbs. Explain how you determined this.

Part c) Suppose we close the switch. Now rank the relative brightness (from brightest to dimmest) of the three bulbs. Explain how you determined this.