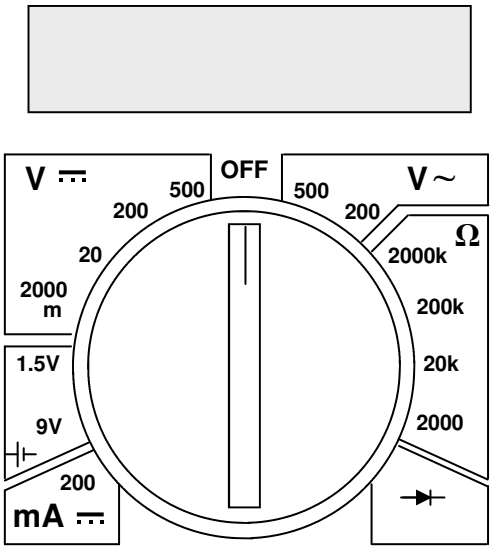
A-day: Due Tues., Apr 15 (Assigned Tues., Apr 10)
B-day: Due Wed., Apr 16(Assigned Wed., Apr 11)

2008 Electricity 6



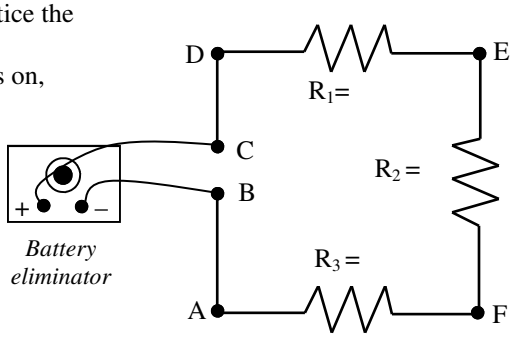
1. Use the multimeter at the left to answer the following questions.
   A. Circle the setting we used for measuring resistance.
   B. Put a square around the setting we used to measure voltage.
   C. If you are trying to measure resistance and the meter says "1 ", what does it mean?

   D. What does the "k" signify?

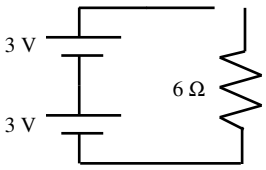
2. What did the blue metal boxes substitute for?

3. In the diagram at the right, notice the gap between points C and D.
   A. If the battery eliminator is on, is the circuit open or closed?

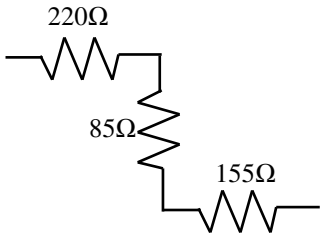
   B. What happens if you put a wire between C and D?

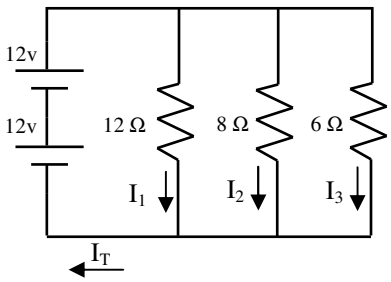


4. Ohmmeter, Voltmeter, or Ammeter?
   A. _____ Must be in series.
   B. _____ The circuit cannot connected.
   C. _____ Must be in parallel with the device being measured.
   D. _____ What is being measured in the circuit at the right.
   E. _____ The circuit must be on.
   F. _____ Delicate. Can be damaged if hooked up wrong.
   G. _____ Can tell you if a battery is worn out.
   H. _____ Can measure a resistor only in a circuit.
   I. _____ Can measure a resistor out of the circuit.



5. What is the total resistance of the three resistors shown at the right?





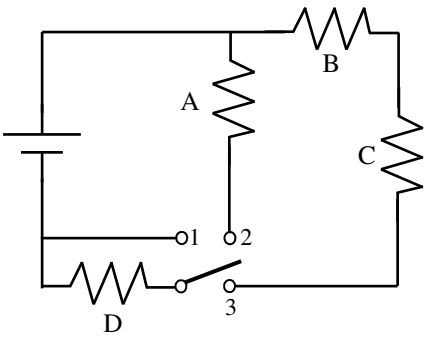
6. A. Calculate the total resistance of the three resistors in the circuit at the left.

   B. Calculate V_{total}.

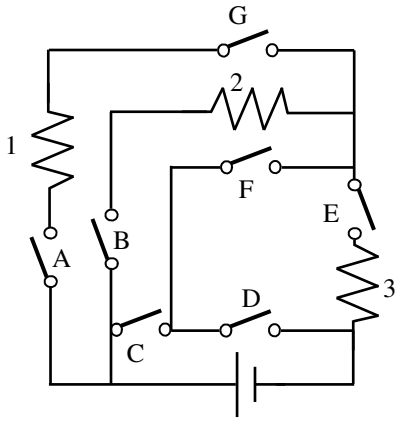
   C. What is the difference of voltage across each of the three resistors?

   D. Calculate (and label) I_1, I_2, and I_3.

   E. What is the total current?



7. A. In order for resistor A to light, the switch must be at position: _____.
   B. Are resistor A and B in series or parallel?
   C. If the switch is at position 3, B, C, and D are in series or parallel?



8. A. To make only resistor 1 on:
   B. To make only resistor 3 on:
   C. To make only resistor 1 and 3 on:

Seniors may stop.

9. Bacteria or Virus?

   A. ____ Is alive.
   B. ____ Has no nucleus.
   C. ____ Causes AIDS.
   D. ____ Has only parts of DNA, but not complete.
   E. ____Can cause diseases.
   F. ____Can be helpful.
   G. ____Can be killed by antibiotics.
   H. ____Does not have organelles.

10. Photosynthesis or Respiration?

   A. ____Produces carbon dioxide.
   B. ____Uses glucose.
   C. ____Makes glucose.
   D. ____Uses energy.
   E. ___ Makes energy.
   F. ___ Produces water.
   G. ___ Done by plants.
   H. ___ Done only by plants.

11. Which body system?

   A. Keeps the species from going extinct.
   B. Uses electricity to send information to the body from the brain.
   C. Includes small and large intestines.
   D. Removes excess water and unwanted wastes from the body.
   E. Uses chemicals to remove the nutrients of food to be used by the body.
   F. Keeps contaminants from entering the body and moisture from escaping.
   G. Moves the bones AND helps move blood around the body, helping the heart.
   H. Gets oxygen and food to the individual body systems and cells.
   I. Include veins and arteries.
   J. Uses white blood cells to fight diseases.
   K. Protects your brain and allows us to keep our shape.
   L. Moves oxygen into and CO_2 out of the body.
   M. Gives off chemicals to make the body "want to do things", including fight, run, cry, be afraid, etc.
   N. The centers of this system makes blood for the circulatory system.
   O. Made up of interconnected neurons.