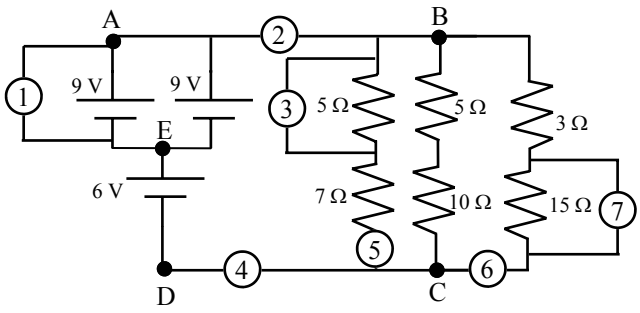
PreAP: Due: Wed., Feb 1(Assigned: Mon., Jan 30)
Reg: Due: Thurs., Feb 2 (Assigned: Tues., Jan 31)

Electricity Review 2

1. Draw the electric field lines that will occur between the two charges.

2. Identify the meters in Circuit A (either A or V): 1: ____; 2: ____; 3: ____; 4:____; 5: ____; 6: ____; 7: ____
3. Find the total voltage.
4. Find the total resistance of the circuit.
5. Find the total current of the circuit.
6. Find the current running through meter 5.

Circuit A



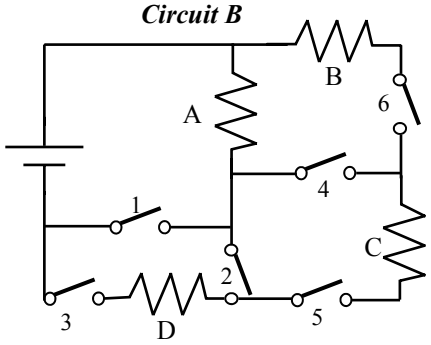
7. A. What does meter 4 read? B. What does meter 1 read?
   C. What does meter 2 read? D. What does meter 6 read?

   E. What does meter 3 read? F. What does meter 7 read?

   G. What's the voltage from B to C? H. What's the voltage from A to B?
   I. What's the voltage at B? J. What's the voltage at D?
   K. How much power does the whole circuit dissipate?

   L. How much power does the 7 Ω resistor use?

Circuit B

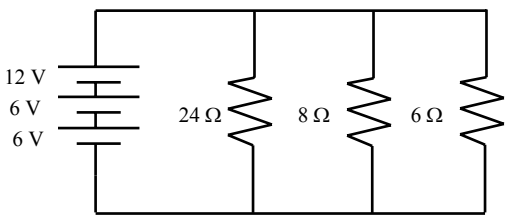


8. Decide which switches in Circuit B need to close to allow the following:
   A. Only resistor B on:
   B. Only resistors B and D on:
   C. Only resistors A and C on:
   D. Only resistors A, C, and D on:

12. In Circuit C, how much charge goes through the 6 Ω resistor in 20 seconds?

13. If your electric company's power rate is $.05 per kWhr, how much will it costs to run a 600 w toaster oven for 20 minutes?

Circuit C



17. Protons are _____; Neutrons are _____; Electrons are _____.
18. Protons put together attract or repel each other?
19. So why do they remain together in the _____?
    Why?

20. Given: AUCUACG.
    A. What molecule do you know this isn't?
    B. How do you know that?
    C. If this came from the nucleus, what molecule is this?
    D. What do we call the process that made it?
    E. Where is it going next?
    F. In the next process (called _____) it will make _____.
    G. Give the nitrogen base sequence that it came from.

    H. Which one (DNA, mRNA, or tRNA) moves within the cell (between organelles)?

21. Draw the Acid and Base scale (called the _____ scale).
    Include the ranges (numbers) also include 1 example of each.
    Include neutral and give and example.

22. Using the diagram at the right, answer the following.
    A. Since object B holds a charge is it an insulator or conductor?
    B. If object A is a conductor, where draw where the negatives go.

    C. If you touch object A while it is close to object B, where will the negatives go?

    D. So, if you touch Object A, while it is close to Object B then move object A away from object B, object A will be positive or negative?