A-day: Due Fri., Apr 25 (Assigned Wed., Apr 23)
B-day: Due Mon., Apr 28 (Assigned Thurs., Apr 24)

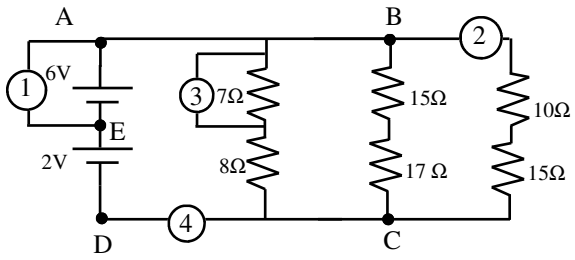
2008 Electricity 10 (Test Review)

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

2. A. Identify the meters in Circuit A:
M1: ____; M2: ____; M3: ____; M4: ____.

   B. What does meter 1 read?

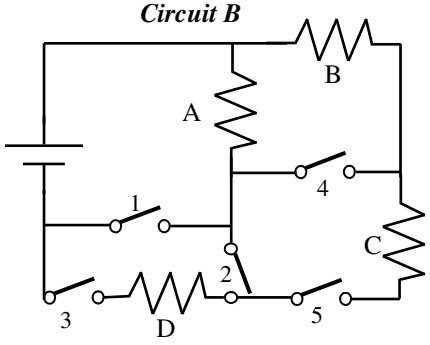
   C. What is the voltage at B?



3. A. Find the electric field 2 cm away from a 8μC charge.

   B. Because the equation has an r2 in the denominator (bottom), if the charge is moved to 4 cm away, by how much does the electric field's strength change?

Circuit B

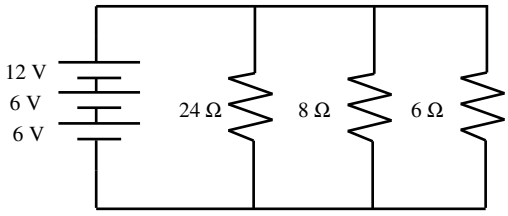


4. Decide which switches in Circuit B need to close to allow the following:
   A. Only resistor A on:
   B. Only resistors A and B on:
   C. Only resistors A and C on:
   D. Only resistors A, B, and D on:

5. A. Find the force between a 6 C and a –3C charge if they are 4 meters apart.

   B. Is this force attractive or repulsive?

6. A. If a balloon rubbed with fur becomes negative, did it gain or lose electrons?
   B. If a negative object touches ground, what happens?



7. A) In Circuit C, which light bulb is brighter?
   B) Why? (*Be specific*.)

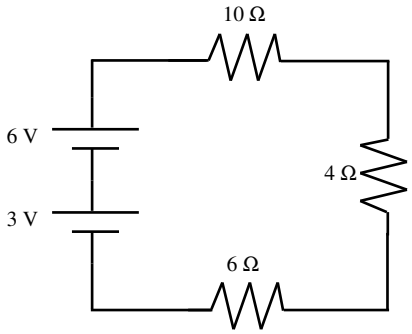
8. A) Is your house in series or parallel?
   B) How do you know for sure?

9. How can you prove that a circuit is in series?

-3C	-8C

10. A) Will two electrons attract or repel each other?
    B) If two electrons are brought closer together, will the force between them increase or decrease?
    C) If even more electrons are brought close to each other, will the force between them increase or decrease?
    D) Of the two square objects at the right, which object has more electrons?
    E) Since the two objects are the same size, which side's electrons are experiencing a greater force of repulsion?
    F) So, which direction will the electrons move?

11. A. Find the current in the circuit.



B. How much voltage is used by the 10Ω resistor?

C. How much voltage is left at the upper right hand corner?

D. How much power is used up in the entire circuit?

12. Make sure you know these terms:

A. Capacitor	F. Insulator	K. Electric Force
B. Fuse	G. Conductor	L. AC (alternating current)
C. Circuit breaker	H. Parallel	M. DC (Direct current)
D. Short circuit	I. Series	
E. Superconductor	J. Electric Field	

13. Study what factors affects resistance.
14. A. Know what all of these are: resistors; battery; wire; light bulb; switch.
    B. Know how to draw them.

15. On the diagram below, Object B has been made negative by rubbing it with fur.
    A. In the first picture (left) draw where the negatives are on Object A.

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

    C. After you touched Object A, (bottom picture) will it have a positive or a negative charge?

    D. This is called charging by: _____.