

Name: \_\_\_\_\_

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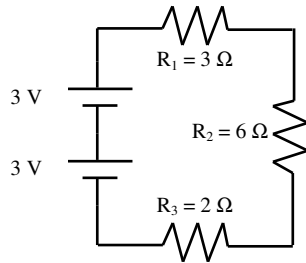
**HW Unit 9:8—Power and Voltage Drops**  
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**A-day: Due Thurs., 4/5 (Assig: 4/3)**  
**B-day: Due Mon., 4/9 (Assig: 4/4)**

- Which one is louder: a 20 w radio or a 50 w?
- Which one uses more power?
- If a resistor uses 10 amps when hooked up to a 6 V battery, find the power it uses.  
Variables      Equation      Solve
- A 30 w light bulb is hooked up to the 120 V in your house. How much current does it use?  
Variables      Equation      Solve

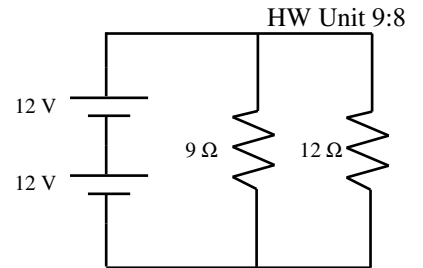
- A 20 A fuse has 18 amps running thru it. What will happen?
- A 15 A circuit breaker has 16 amps trying to go thru it.  
A) What happens?  
B) Do you have to replace the circuit breaker?  
C) What if it was a fuse?
- Why do fuses melt?
- When you turn on a light bulb, do you have to wait for the electrons to get to the light bulb to turn on? Why or why not?

- Are these resistors in parallel or series?
- Which one will use the most power?
- If they were light, which one would be dimmest?
- Find the total current.



- Find the voltage used by the 2  $\Omega$  ( $V_{2\Omega}$ ).
- Find the power used by the 2  $\Omega$  resistor ( $P_{2\Omega}$ ).

- Parallel or series?
- Which resistor will use the most power?
- Find the current flowing thru both resistors.



- Find the total current ( $I_T$ ).
- Find the power used by the 9 $\Omega$  resistor ( $P_{9\Omega}$ ).
- Find the total power of the circuit:  $I_T$ .