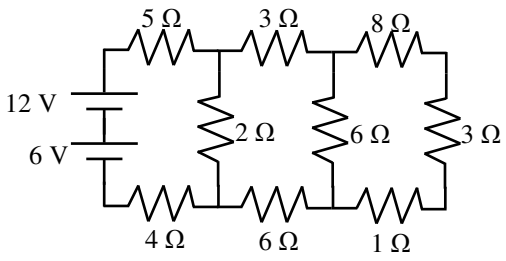
A-Day Due Fri., Apr 24
B-Day: Due TAKS WEEK

2009 PreAP Circuits 4

1. Do the regular physics homework: "Electricity 9". Stop after question 7.



2. *Referring to the "Total Resistance" notes to answer the following. You should redraw the circuit at least 3 times, as you simplify it. The first question is exactly from the notes. I will walk you thru the other questions, so do them in order. HINT: it may be easier to refer to one of your simplified circuits, instead.*
   A. What is the total resistance of the circuit above?

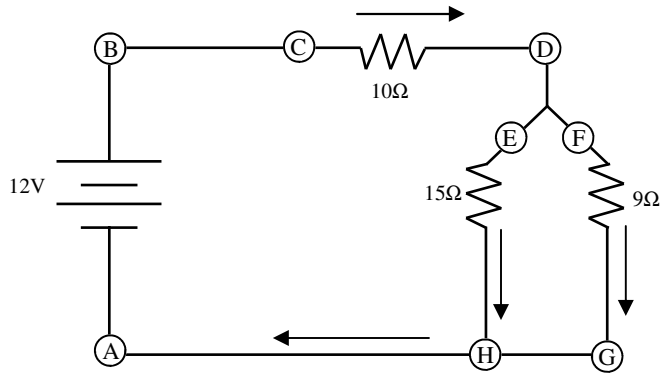
   B. How much current is flowing thru the 5Ω resistor?

   C. How much voltage is used by the 5Ω resistor?

   D. How much voltage is used by the 4Ω resistor?

   E. How much voltage is left for the 2Ω resistor to use?

   F. What is the current thru the 2Ω resistor?

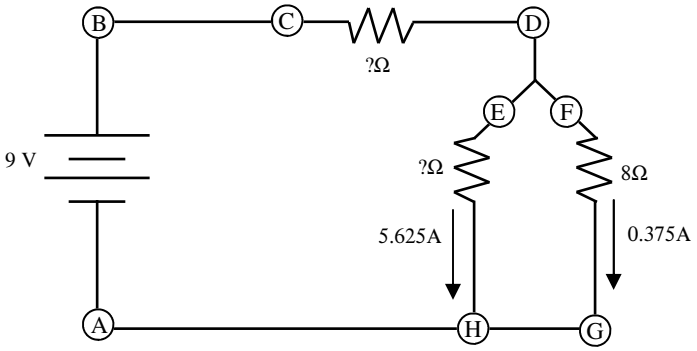


3. First let me talk you thru this circuit. It would be VERY helpful if you labeled the diagram as you answer the questions. I didn't take the time to work out even numbers.
   A. What is the voltage at A?
   B. What is the voltage at B?
   C. What is the voltage at C
   D. What is the total resistance between the 15Ω and 9Ω resistors?

   E. Using your answer above and the 10Ω resistor, what is the total resistance of the circuit?

   F. What is the total current?
   G. How much current is flowing thru the 10Ω resistor?
   H. How much voltage is used by the 10Ω resistor?

   I. How much voltage is left at D?
   J. How much voltage is at E and F?
   K. How much current flows thru the 15Ω resistor?
   L. How much current flows thru the 9Ω resistor?
   M. What is the total current of the circuit?



4. Figure out the two unknown resistors. There is enough information given. *(Use the same principles as the previous circuit. If you don't get it, come in for help.)*

5. In the circuit above:
A. Draw an ammeter that measures the total current.
B. Draw a voltmeter that reads the voltage used by the 8Ω resistor.

6. From your book, define emf.

7. Book p.757: Q38, 39, 42.