FLINN SCIENTIFIC

Name_____

AP Physics 2 Review Questions

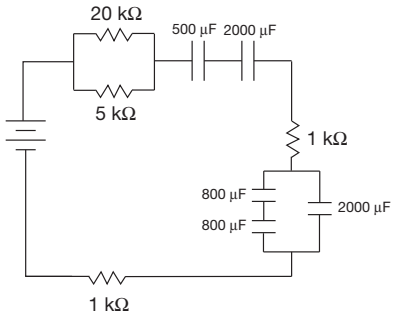
Integrating Content, Inquiry and Reasoning

1. The capacitance through one branch of a circuit is measured to be 200 µF. A capacitor is added to the circuit. The effective capacitance is now measured to be 120 µF.

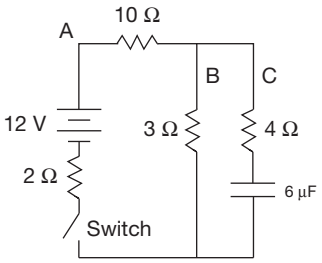
   a. Was the new capacitor added in series or in parallel to the circuit? Explain how you made your determination.

   b. What was the value of the added capacitor?

2. The time constant for any given RC circuit is the value of the effective resistance of the circuit multiplied by the effective capacitance of the circuit. What is the value of the time constant for the circuit below?



3. For the circuit below, the switch is closed and steady-state conditions have been reached, meaning the capacitor is fully charged.



   a. What is the voltage across the 4 Ω resistor?

   b. What is the voltage across the 6 µF capacitor?

   c. How much charge is stored on the capacitor?