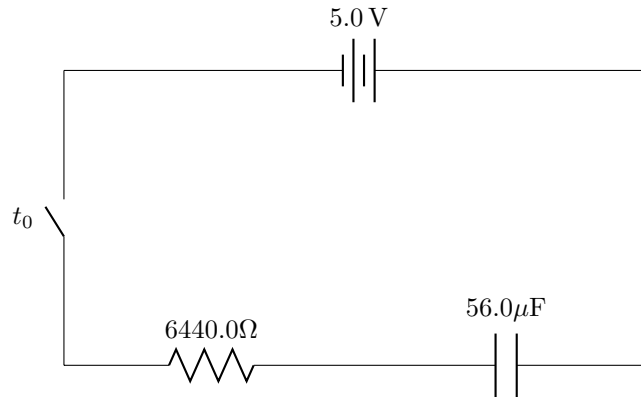


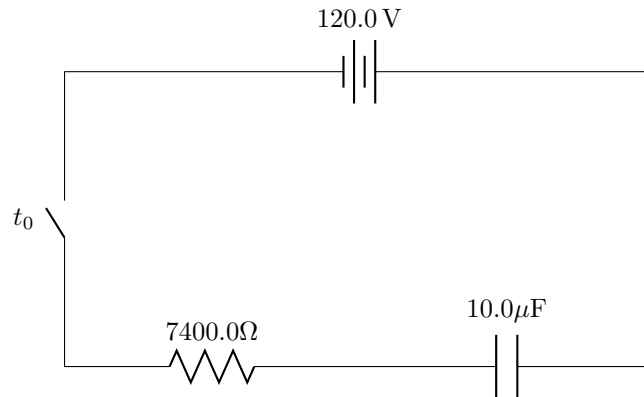
Name: \_\_\_\_\_

Answer the questions in the spaces provided on the question sheets. If you run out of room for an answer, continue on the back of the page.

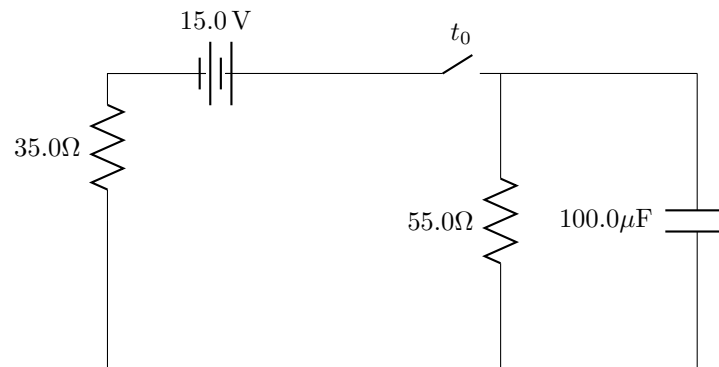


1. Find the charge, as a function of time, on the capacitor for the above circuit when the switch is closed. What is the value for each at 12 seconds? What about 120 seconds?

2. Suppose that the circuit below is allowed to run for a very long period of time so that the capacitor is fully charged. Then the battery is removed and replaced by a wire so that the capacitor can discharge. Find the charge, as a function of time, and the current as a function of time. What is the value for each at 5 seconds? What about 50 seconds?



3. In the circuit below, find the current passing through each branch and the charge on the capacitor at the following times: once the switch is closed, and a long, long time later.



4. In the circuit below, find the current passing through each branch and the charge on the capacitor at the following times: once the switch is closed, and a long, long time later.

