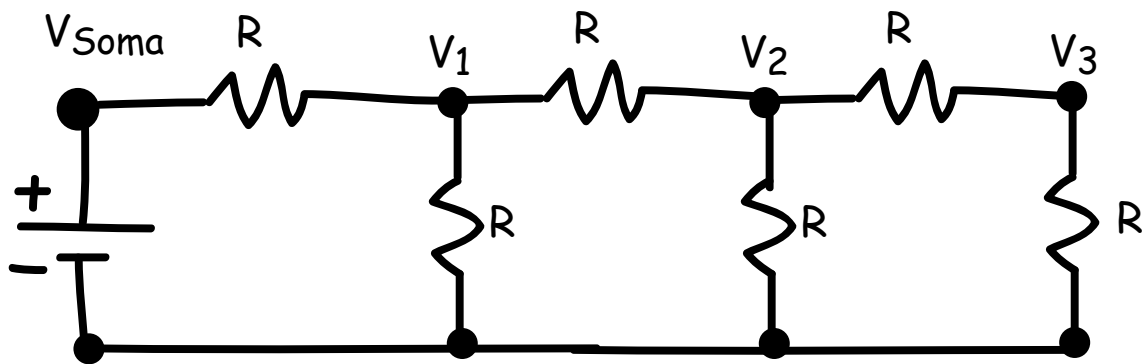
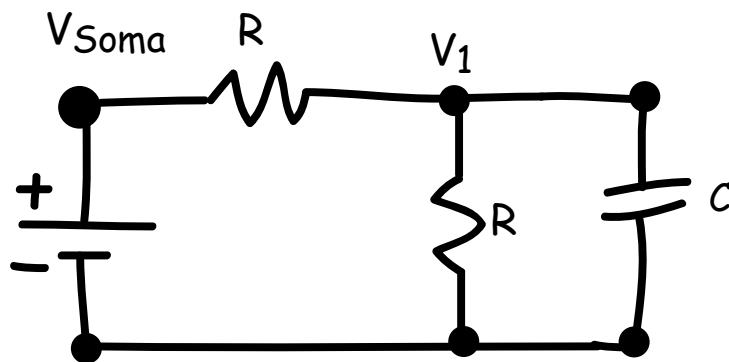


1. Find the membrane voltage, V_{Membrane} , in terms of V_{Na} , V_{K} , R_{Na} , R_{K} , and R_{Leak} .



2. Find the the voltages at each electrotonic fall-off in above model of an apical dendrite, denoted V_1 , V_2 , and V_3 , in terms of the potential at the soma, V_{Soma} .



3. What is the steady-state value of the voltage drop across the capacitor, C ?

4. This is hard. What is the expression for the time constant in the above circuit?