

A capacitor is in parallel with two current sources. Source  $I_{SC}$  is constant with a value of 50 mA. Source  $I_{SQ}$  switches on and off between 100 mA and 0 mA, with a period of 20 ms, as shown below. Make a quantitative sketch the corresponding capacitor voltage. Assume that the capacitor voltage  $v_C = 5$  V at  $t = 0$ . (You may want to start by making a sketch of the capacitor current as a function of time.) Be sure to show any calculations used in making the voltage plot.

