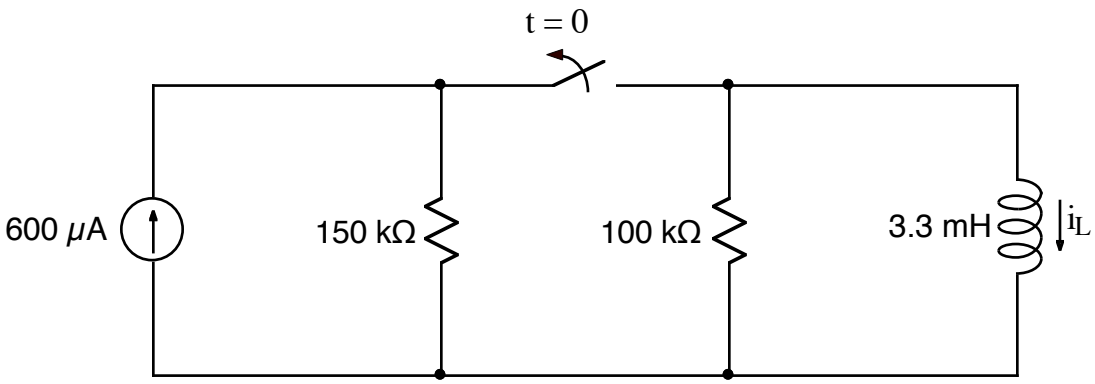
HOMEWORK #11

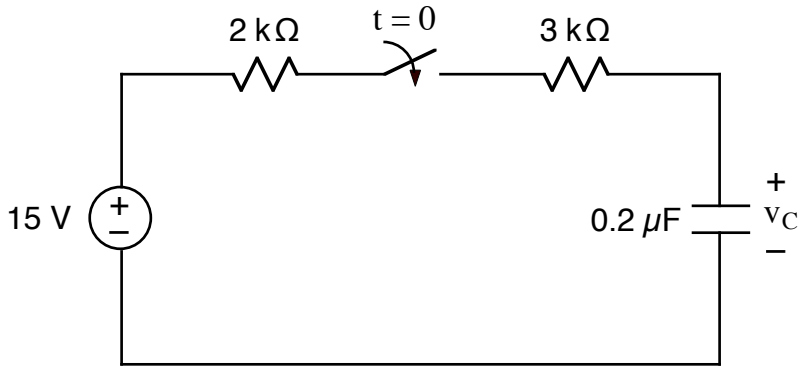
1.



After being closed for a long time, the switch opens at t = 0. Find $i_L(t)$ for t > 0.

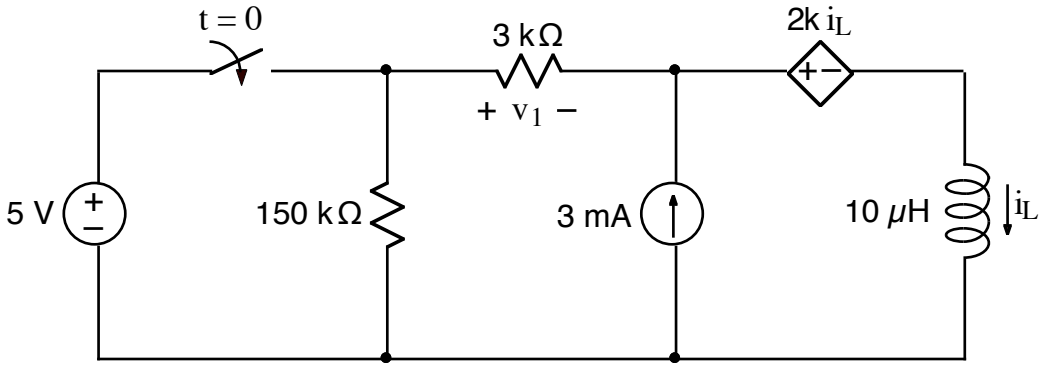
Hint: use a Thevenin equivalent for the circuit to the left of the inductor.

2.



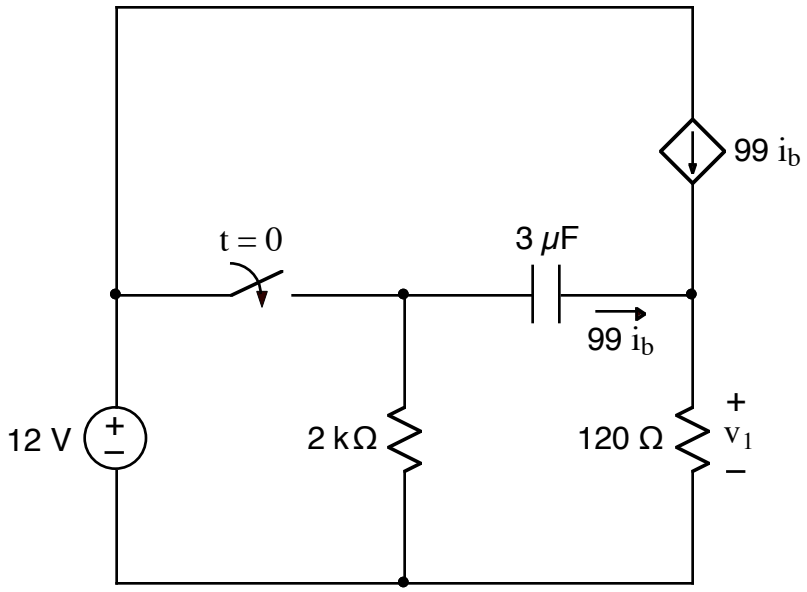
After being open for a long time, the switch closes at t = 0. $v_C(t = 0^-) = 0V$. Find $v_C(t)$ for t > 0.

3.



After being open for a long time, the switch closes at t = 0. Find $v_1(t)$ for t > 0.

4.



After being open for a long time, the switch closes at $t = 0$.

a) Find $v_C(0^-)$ for the above circuit.

b) For $t > 0$, find the Thevenin equivalent of the above circuit as seen from the terminals where the capacitor is attached. In other words, remove the capacitor from the above circuit and find the Thevenin equivalent of the circuit as seen by looking into the wires where the capacitor was attached.

5. For the circuit in problem 4, find $v_1(t)$ for $t > 0$.