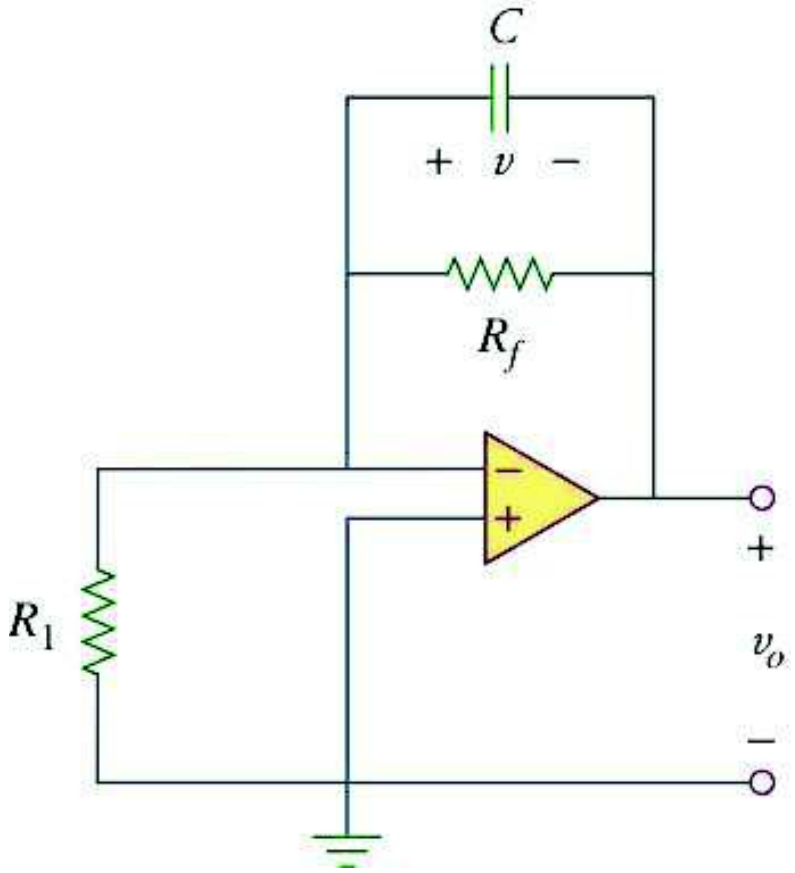
"Pessimism is just an ugly word for pattern recognition."
-Anonymous

Problem 1 *Quickie* *(12.5 points)*

a) In the box below, provide a symbolic expression for v_0 for t > 0 if $v(0)$ = 4 V.

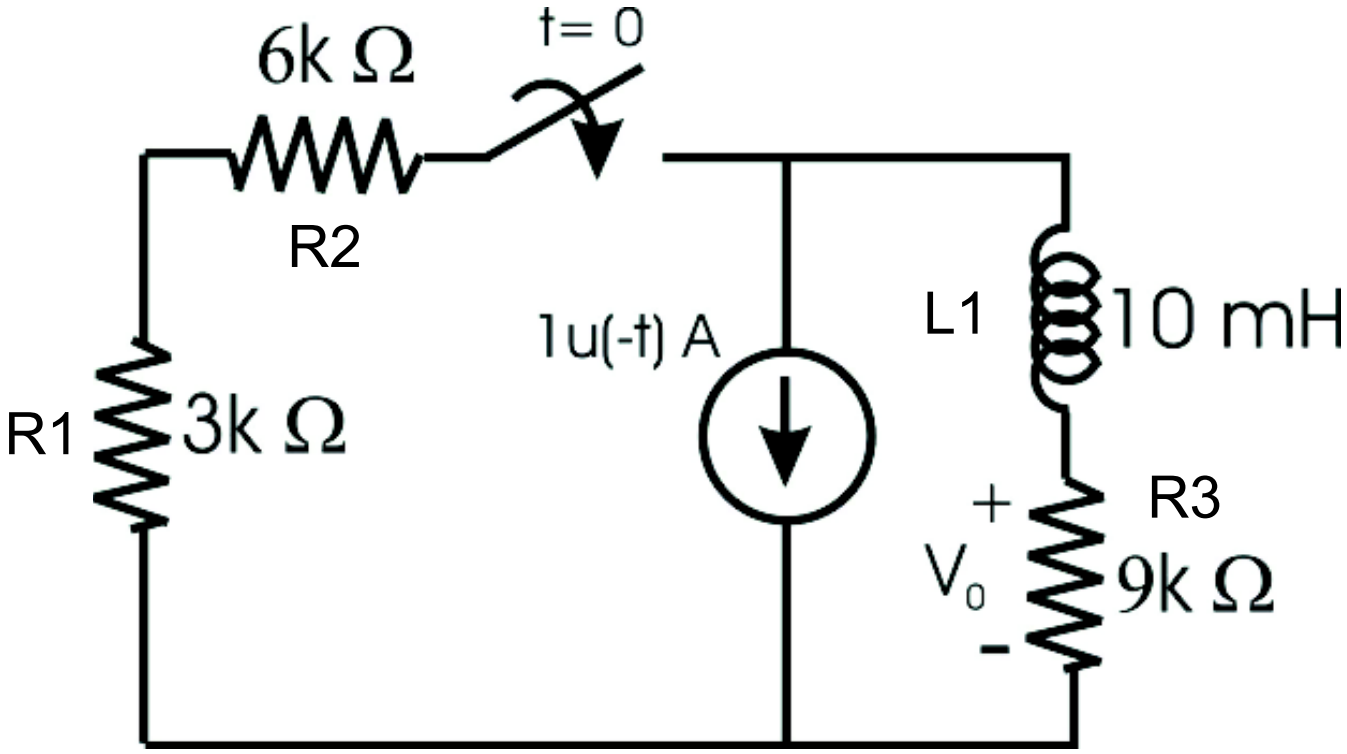


b) If $\mathbf{R_f}$ = 40 kΩ, $\mathbf{R_1}$ = 10 kΩ, **C** = 10 μF, and ***v(0)*** = 4 V, write the expression for $\boldsymbol{v_0}$ for t > 0 in the **BOX BELOW.** *(2.5 points)*

"If a person offends you… do not resort to extremes,
simply watch your chance and hit him with a brick."
- Mark Twain

Problem 2 *First order circuits* *(25 points)*

Consider the circuit below.



a) What is the value of V_0 at $t = 0^+$? **Write It in the BOX BELOW.** *(5 points)*

b) *Using whatever method you like (yes, anything, don't raise your hand to ask if you can use XXX)*, provide a ***symbolic expression*** for the voltage $V_0(t)$ for t > 0 in the **BOX BELOW.** *(17.5 points)*

c) Using the values provided in the figure, provide an expression for the voltage $V_0(t)$ for t > 0 in the **BOX BELOW.** *(2.5 points)*