Homework #8
Due April 1

Problem 1) Find the current \( i_0(t) \) for all \( t \) for the circuit shown.

Problem 2) Determine the current \( i_0(t) \) for all \( t \) in the circuit.

Problem 3) Find the voltage \( v_0(t) \) for all \( t \) for the circuit shown.

Problem 4) Calculate the voltage \( v_0(t) \) for all \( t \) in the circuit at right.
Problem 5) Determine the voltage $v_0(t)$ for all time $t$. Note that to get $R_{Th}$ for the time constant, you will have to use open circuit voltage and short circuit current because of the dependent source.

Problem 6) Find the current $i_0(t)$ for all time $t$. The same note applies here as in the previous problem.

Problem 7) Find the voltage $v_0(t)$ for all time $t$ given that the current is a square pulse as shown. What duration would the pulse need to be for the voltage to reach 40 V at its peak?

Problem 8) Find the current $i_A(t)$ for all $t$ for the voltage waveform $v(t)$ shown. What amplitude would the second part of the pulse (the 5 V segment) need to have to make the current be exactly 0 at $t = 4$ ms?